

preempt and supersede the application of state laws and rules and local federal court rules to the extent that they relate to contacts by attorneys for the government, and those acting at their direction or under their supervision, with represented parties or represented persons in criminal or civil law enforcement investigations or proceedings; it is designed to preempt the entire field of rules concerning such contacts. When the Attorney General finds a willful violation of any of the rules in this part, however, sanctions for the conduct that constituted a willful violation of this part may be applied, if warranted, by the appropriate state disciplinary authority.

## **PART 79—CLAIMS UNDER THE RADIATION EXPOSURE COMPENSATION ACT**

### **Subpart A—General**

- 79.1 Purpose.
- 79.2 General definitions.
- 79.3 Compensable claim categories under the Act.
- 79.4 Burden of proof, production of documents, presumptions, and affidavits.
- 79.5 Requirements for written medical documentation, contemporaneous records, and other records or documents.

### **Subpart B—Eligibility Criteria for Claims Relating to Childhood Leukemia**

- 79.10 Scope of subpart.
- 79.11 Definitions.
- 79.12 Criteria for eligibility.
- 79.13 Proof of physical presence.
- 79.14 Proof of initial exposure prior to age 21.
- 79.15 Proof of onset of leukemia between two and thirty years after first exposure.
- 79.16 Proof of medical condition.

### **Subpart C—Eligibility Criteria for Claims Relating to Certain Specified Diseases**

- 79.20 Scope of subpart.
- 79.21 Definitions.
- 79.22 Criteria for eligibility.
- 79.23 Proof of physical presence.
- 79.24 Proof of initial or first exposure after age 20 for claims under § 79.22(b)(1), or before age 20 for claims under § 79.22(b)(4), or before age 40 for claims under § 79.22(b)(5), or before age 30 for claims under § 79.22(b)(7).
- 79.25 Proof of onset of leukemia between two and thirty years after first exposure, and proof of onset of a specified compen-

sable disease more than five years after first exposure.

- 79.26 Proof of medical condition.
- 79.27 Proof of no heavy smoking, no heavy drinking, no heavy coffee drinking, and no indication of disease.

### **Subpart D—Uranium Miners**

- 79.30 Scope of subpart.
- 79.31 Definitions.
- 79.32 Criteria for eligibility.
- 79.33 Proof of employment in a uranium mine.
- 79.34 Proof of working level month exposure to radiation.
- 79.35 Proof of lung cancer.
- 79.36 Proof of non-malignant respiratory disease.
- 79.37 Proof of smoking, nonsmoking, and age.

### **Subpart E—Eligibility Criteria for Claims by Onsite Participants**

- 79.40 Scope of subpart.
- 79.41 Definitions.
- 79.42 Eligibility criteria.
- 79.43 Proof of participation onsite during a period of atmospheric nuclear testing.
- 79.44 Proof of medical condition.
- 79.45 Proof of initial or first exposure after age 20 for the condition listed in § 79.22(b)(1), or before age 20 for the condition listed in § 79.22(b)(4), or before age 40 for the condition listed in § 79.22(b)(5), or before age 30 for the condition listed in § 79.22(b)(7).
- 79.46 Proof of onset of leukemia between two and thirty years after first exposure, and proof of onset of a specified compensable disease more than five years after first exposure.
- 79.47 Proof of no heavy smoking, no heavy drinking, no heavy coffee drinking, and no indication of disease.

### **Subpart F—Procedures**

- 79.50 Attorney General's delegation of authority.
- 79.51 Filing of claims.
- 79.52 Review and resolution of claims.
- 79.53 Appeals procedures.
- 79.54 Attorneys.
- 79.55 Procedures for payment of claims.

#### **APPENDIX A TO PART 79—PULMONARY FUNCTION TABLES**

#### **APPENDIX B TO PART 79—BLOOD-GAS TABLES**

#### **APPENDIX C TO PART 79—RADIATION EXPOSURE COMPENSATION ACT OFFSET WORKSHEET—ONSITE PARTICIPANTS**

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## Subpart A—General

### § 79.1 Purpose.

The purpose of these regulations is to implement section 6 of the Radiation Exposure Compensation Act of 1990, 42 U.S.C. 2210 note, which authorizes the Attorney General of the United States to establish procedures for making certain payments to qualifying individuals who contracted one of the diseases listed in the Act. The amount of each payment and a general statement of the qualifications are indicated in § 79.3(a). The procedures established in these regulations are designed to utilize existing records so that claims can be resolved in a reliable, objective, and nonadversarial manner, quickly and with little administrative cost to the United States or to the person filing the claim.

### § 79.2 General definitions.

(a) *Act* means the Radiation Exposure Compensation Act of 1990, Public Law 101-426, 104 Stat. 920, as amended by Public Law 101-510, section 3139, 104 Stat. 1835 (42 U.S.C. 2210 note).

(b) *Child* means a recognized natural child of the claimant, a step-child who lived with the claimant in a regular parent-child relationship, and an adopted child of the claimant.

(c) *Claim* means a petition for compensation under the Act filed with the Radiation Exposure Compensation Unit by a claimant or by his/her eligible surviving beneficiaries.

(d) *Claimant* means the individual, living or deceased, who is alleged to satisfy the criteria for compensation in either section 4 or section 5 of the Act.

(e) *Contemporaneous Record* means any document created at or around the time of the event that is recorded in the document.

(f) *Eligible surviving beneficiary* means a spouse, child, parent, grandchild or grandparent who is entitled under section 6(c)(4) (A) or (B) of the Act to file a claim and/or receive a payment on behalf of a deceased claimant.

(g) *Grandchild* means a child of a child of the claimant.

(h) *Grandparent* means a parent of a parent of the claimant.

(i) *Immediate family member* of a person means a spouse or child if the per-

son is an adult, but if the person is a minor, immediate family member means either parent.

(j) *Medical document, documentation, or record* means any contemporaneous record of any physician, hospital, clinic or other certified or licensed health care provider, or any other records routinely and reasonably relied on by physicians in making a diagnosis.

(k) *Radiation Exposure Compensation Unit* or *Unit* means the component of the Constitutional and Specialized Tort Litigation Section of the Torts Branch of the Civil Division of the United States Department of Justice designated by the Attorney General to execute the powers, duties and responsibilities assigned to the Attorney General pursuant to sections 4(a)(1)(C), 4(a)(2)(C)(ii), section 5(a)(2)(B)(ii), section 6, and any other pertinent provisions of the Act.

(l) *Parent* means the natural or adoptive father or mother of the claimant.

(m) *Spouse* means a wife or husband who was married to the claimant for a period of at least one (1) year immediately before the death of the claimant.

(n) *Trust Fund or Fund* means the Radiation Exposure Compensation Trust Fund in the Department of the Treasury, administered by the Secretary of the Treasury pursuant to section 3 of the Act.

### § 79.3 Compensable claim categories under the Act.

(a) In order to receive a compensation payment, each claimant or eligible surviving beneficiary must establish that the claimant meets each and every criterion of eligibility for at least one of the following compensable categories designated in the Act:

(1) Claims of childhood leukemia by persons presumably exposed to fallout from the atmospheric detonation of nuclear devices at the Nevada Test Site due to their physical presence in an affected area during a designated time period. The amount of compensation is \$50,000. The regulations governing these claims are set forth in subpart B of this part.

(2) Claims relating to certain specified diseases by persons presumably exposed to fallout from the atmospheric

detonation of nuclear devices at the Nevada Test Site due to their physical presence in an affected area during a designated time period. The amount of compensation is \$50,000. The regulations governing these claims are set forth in subpart C of this part.

(3) Claims relating to lung cancer or certain nonmalignant respiratory diseases by persons employed in uranium mines in Arizona, Colorado, New Mexico, Utah or Wyoming during a designated time period, and who were exposed to specified minimum levels of radiation during the course of their employment. The amount of compensation is \$100,000. The regulations governing these claims are set forth in subpart D of this part.

(4) Claims relating to certain specified diseases by persons who were on-site participants in the atmospheric detonation of a nuclear device. The amount of compensation is \$75,000. The regulations governing these claims are set forth in subpart E of this part.

(b) Any claim that does not meet all the criteria for at least one of these categories, as set forth in these regulations, must be denied.

(c) All claims for compensation under the Act must comply with the claims procedures and requirements set forth in subpart F of this part before any payment can be made from the Fund.

**§ 79.4 Burden of proof, production of documents, presumptions, and affidavits.**

(a) Except where otherwise noted, the claimant or eligible surviving beneficiary bears the burden of proving by a preponderance of the evidence the existence of each and every criterion necessary to establish eligibility under any compensable claim category set forth in § 79.3(a). Proof by a preponderance of the evidence means that it is more likely than not that the proposition to be proved is true. Subject to the exceptions expressly provided in the regulations, the claimant or eligible surviving beneficiary also bears the burden of providing to the Radiation Exposure Compensation Unit all written medical documentation, contemporaneous records, or other records and documents necessary to establish any

and all criteria for compensation set forth in these regulations.

(b) A claimant or eligible surviving beneficiary will not be entitled to any presumption otherwise provided for in these regulations where reliable, material evidence exists which tends to disprove the existence of the fact that is the subject of the presumption. When such evidence exists, the claimant or eligible surviving beneficiary shall be notified and afforded the opportunity to submit additional written medical documentation or records in accordance with § 79.52 (b) or (c).

(c) Subject to the exceptions below, no written affidavits or declarations, by the claimant, eligible surviving beneficiary, or any other person, will be accepted as proof of any criterion for eligibility or relied on in determining whether a claim meets the requirements of the Act for compensation. Written affidavits or declarations, subject to penalty for perjury, will be accepted only to prove:

(1) Eligibility of family members under § 79.51 (e), (f), (g), (h) or (i);

(2) Other compensation received under § 79.55 (c) or (d);

(3) The amount of coffee consumed as set forth under § 79.27(c); or

(4) Mining information under § 79.33(b)(2).

**§ 79.5 Requirements for written medical documentation, contemporaneous records, and other records or documents.**

(a) All written medical documentation, contemporaneous records, and other records or documents submitted by claimant or eligible surviving beneficiary to prove any criteria provided for in these regulations must be originals, or certified copies of the originals, unless it is impossible to obtain an original or certified copy of the original. If it is impossible for a claimant to provide an original or certified copy of an original, the claimant or eligible surviving beneficiary must provide a written unsworn statement with the uncertified copy setting forth the reason why it is impossible.

(b) All documents submitted by a claimant or his/her eligible surviving beneficiary must bear sufficient indicia of authenticity or otherwise provide

some guarantee of trustworthiness. The Unit shall not accept as proof of any criteria of eligibility any record or document that does not bear sufficient indicia of authenticity, or is in such a physical condition, or contains such information, that otherwise indicates the record or document is not reliable or trustworthy. When a record or document is not accepted by the Unit under this section, the claimant or eligible surviving beneficiary shall be notified and afforded the opportunity to submit additional written medical documentation or records in accordance with § 79.52 (b) or (c).

### Subpart B—Eligibility Criteria for Claims Relating to Childhood Leukemia

#### § 79.10 Scope of subpart.

The regulations in this subpart describe the criteria for eligibility for compensation under section 4(a)(1) of the Act, and the type and extent of evidence that will be accepted as proof of the various criteria. Section 4(a)(1) of the Act provides for a payment of \$50,000 to individuals presumably exposed to fallout from the detonation of atmospheric nuclear devices at the Nevada Test Site due to their physical presence in an affected area during a designated time period, and later developed leukemia (other than chronic lymphocytic leukemia).

#### § 79.11 Definitions.

(a) *Affected area* means the following geographical descriptions, as they were recognized by the state in which they are located, as of October 15, 1990:

(1) In the State of Utah, the counties of Beaver, Garfield, Iron, Kane, Millard, Piute, Sevier and Washington;

(2) In the State of Nevada, the counties of Eureka, Lander, Lincoln, Nye, White Pine, and that portion of Clark County that consists of townships 13 through 16 at ranges 63 through 71;

(3) In the State of Arizona, that portion of the State that is north of the Grand Canyon and west of the Colorado River.

(b) *Physically present* means the physical presence of a person at any place within the affected area for a substan-

tial period of each day of the time period claimed.

(c) *Designated time period* means the period beginning on January 21, 1951 and ending on October 31, 1958, or the period beginning on June 30, 1962 and ending on July 31, 1962, whichever is appropriate.

(d) *First exposure* or *initial exposure* means the date on which the claimant was first physically present in the affected area during the designated time period.

(e) *Onset* or *incidence* of a specified compensable disease means the date the disease was first diagnosed by a physician. However, in the case of leukemia, the date of onset will be presumed to be the date of first diagnosis by a physician unless otherwise established by appropriate authorities at the National Cancer Institute using such written medical documentation as may be prescribed by the Unit as appropriate for an individual case.

(f) *Leukemia* means any medically-recognized form of acute or chronic leukemia, other than chronic lymphocytic leukemia.

#### § 79.12 Criteria for eligibility.

To establish eligibility for compensation under this subpart, a claimant or eligible surviving beneficiary must show by a preponderance of the evidence that each of the following criteria are satisfied:

(a) The claimant was physically present in the affected area for either

(1) A period of at least one year during the period beginning on January 21, 1951 and ending on October 31, 1958, or

(2) The entire period beginning on June 30, 1962 and ending on July 31, 1962;

(b) After such period of physical presence the claimant contacted leukemia;

(c) The claimant's initial exposure occurred prior to age 21; and

(d) The onset of the leukemia occurred between two (2) and thirty (30) years after the date of first exposure.

#### § 79.13 Proof of physical presence.

(a) For purposes of establishing eligibility under § 79.12(a)(1), the claimant must have been physically present in the affected area for a total of one year, consecutively or cumulatively,

during the period beginning on January 21, 1951, and ending on October 31, 1958. For purposes of establishing eligibility under § 79.12(a)(2), the claimant must have been physically present within the affected area continuously during the period beginning on June 30, 1962 and ending July 31, 1962.

(b) Subject to the limitation of § 79.4(c), proof of physical presence may be made by the submission of any trustworthy contemporaneous records that, on their face or in conjunction with other such records, establish that the claimant was present in the affected area during the designated time period. Contemporaneous records from the following sources are presumed to be trustworthy:

(1) Records of the federal government (including verified information submitted for a security clearance), any tribal government, or any state, county, city or local governmental office, agency, department, board or other entity, or other public office or agency;

(2) Records of any accredited public or private educational institution;

(3) Records of any private utility licensed or otherwise approved by any governmental entity, including any such utility providing telephone services;

(4) Records of any public or private library;

(5) Records of any state or local historical society;

(6) Records of any religious organization that has tax-exempt status under section 501(c)(3) of the United States Internal Revenue Code;

(7) Records of any regularly conducted business activity or entity;

(8) Records of any recognized civic or fraternal association or organization;

(9) Medical records created during the designated time period.

(c) Proof of physical presence by contemporaneous records may also be made by submission of original (no copies) postcards and envelopes from letters addressed to the claimant or an immediate family member during the designated time period which bear a postmark and a cancelled stamp(s).

(d) An individual who resided or was employed on a full-time basis within the affected area is presumed to have been physically present during the

time period of residence or full-time employment.

(e) For purposes of establishing eligibility under § 79.12(a)(1), proof of residence at one or more addresses within the affected area at two different dates one year or more apart and less than 2 years apart, and between January 21, 1951 and October 31, 1958, will be presumed to establish physical presence for the necessary one year period.

(f) For purposes of establishing eligibility under § 79.12(a)(1), proof of full-time employment at one location within the affected area at two different dates one year or more apart and less than 2 years apart, and between January 21, 1951 and October 31, 1958, will be presumed to establish physical presence for the necessary one year period.

(g) For purposes of establishing eligibility under § 79.12(a)(2), proof of residence within the affected area at least one day during the period June 30, 1962 to July 31, 1962, and proof of residence at the same address within six months before June 30, 1962, and six months after July 31, 1962, will be presumed to establish physical presence for the necessary one-month-and-one-day period.

(h) For purposes of establishing eligibility under § 79.12(a)(2), proof of full-time employment within the affected area at least one day during the period June 30, 1962 to July 31, 1962, and proof of full-time employment at the same location within six months before June 30, 1962, and six months after July 31, 1962, will be presumed to establish physical presence for the necessary one-month-and-one-day period.

(i) For purposes of establishing eligibility under § 79.12(a)(2), proof of residence or full-time employment at the same address or location on two separate dates at least fourteen (14) days apart within the time period June 30, 1962 to July 31, 1962 will be presumed to establish physical presence for the necessary one-month-and-one-day-period.

(j) A claimant who was a participant in any study for scientific purposes conducted by or under the auspices of any public office or agency, or university medical school, or whose immediate family member was a participant in any such study, need not submit proof of physical residence at the time

#### § 79.14

the claim is filed. The claimant or eligible surviving beneficiary must submit an authorization or release which authorizes the Radiation Exposure Compensation Unit to review records pertaining to residence created or acquired by the public office or agency, or university medical school, during the course of the study.

(1) If an immediate family member of the claimant was a participant in any such study, and the claimant was not, the claimant or eligible surviving beneficiary must also submit evidence to show that the participant in the study was an immediate family member of the claimant, and that the claimant resided at the same address as the participant during that time period. Absent evidence to the contrary, all members of an immediate family are presumed to reside at the same address, including any children under the age of eighteen (18).

(2) If the records of the study are insufficient to prove the claimant was physically present in the affected area for the specified period of time, the Unit will notify the claimant or eligible surviving beneficiary and afford that person the opportunity to submit contemporaneous records to establish physical presence within the affected area in accordance with § 79.52(c) of these regulations.

#### § 79.14 Proof of initial exposure prior to age 21.

(a) Proof of the claimant's date of birth must be established by the submission of one of the following records:

- (1) Birth certificate;
- (2) Baptismal certificate;
- (3) Tribal records;
- (4) Hospital records of birth.

(b) Absent any indication to the contrary, the earliest date within the designated time period indicated on any records accepted by the Radiation Exposure Compensation Unit as proof of the claimant's physical presence in the affected area will be presumed to be the date of initial exposure.

#### § 79.15 Proof of onset of leukemia between two and thirty years after first exposure.

Absent any indication to the contrary, the earliest date within the des-

#### 28 CFR Ch. I (7-1-98 Edition)

ignated time period indicated on any records accepted by the Radiation Exposure Compensation Unit as proof of the claimant's physical presence in the affected area will be presumed to be the date of first exposure. The date of onset shall be presumed to be the date of diagnosis as indicated in the medical documentation accepted by the Radiation Exposure Compensation Unit as proof of the claimant's leukemia, unless otherwise established in accordance with § 79.11(e).

#### § 79.16 Proof of medical condition.

(a) Written medical documentation is required in all cases to prove that the claimant suffered from or suffers from leukemia. Proof that the claimant contracted leukemia must be made either by using the procedure outlined in paragraph (b) of this section or submitting the documentation required in paragraph (c) of this section.

(b) If a claimant was diagnosed as having leukemia in the States of Arizona, Colorado, Nevada, New Mexico, Utah or Wyoming, the claimant or eligible surviving beneficiary need not submit any written medical documentation of disease at the time the claim is filed (although written medical documentation may subsequently be required). Instead, the claimant or eligible surviving beneficiary must submit with the claim an Authorization To Release Medical and Other Information, valid in the state of diagnosis, that authorizes the Unit to contact the appropriate state cancer or tumor registry. The Unit will accept as proof of medical condition verification from the state cancer or tumor registry that it possesses medical records or abstracts of medical records of the claimant that contain a verified diagnosis of one type of leukemia. If the designated state does not possess medical records or abstracts of medical records that contain a verified diagnosis of leukemia, the Radiation Exposure Compensation Unit will notify the claimant or eligible surviving beneficiary and afford that individual the opportunity to submit the written medical documentation required in paragraph (c) of this section, in accordance with the provisions of § 79.52(b).

(c) Proof that the claimant contracted leukemia may be made by the submission of one or more of the following contemporaneous medical records provided that the specified document contains an explicit statement of diagnosis or such other information or data from which appropriate authorities at the National Cancer Institute can make a diagnosis of leukemia to a reasonable degree of medical certainty. If the medical record submitted does not contain sufficient information or data to make such a diagnosis, the Unit will notify the claimant or eligible surviving beneficiary and afford that individual the opportunity to submit additional medical records identified below, in accordance with the provisions of § 79.52(b). The written medical documentation submitted must also contain sufficient information from which appropriate authorities at the National Cancer Institute can determine the type of leukemia contracted by the claimant.

- (1) Bone marrow biopsy or aspirate report;
- (2) Peripheral white blood cell differential court report;
- (3) Autopsy report;
- (4) Hospital discharge summary;
- (5) Physician summary;
- (6) Death certificate, provided that it is signed by a physician at the time of death.

### Subpart C—Eligibility Criteria for Claims Relating to Certain Specified Diseases

#### § 79.20 Scope of subpart.

The regulations in this subpart describe the criteria for eligibility for compensation under sections 4(a)(2) (A) and (B) of the Act, and the type and extent of evidence that will be accepted as proof of the various criteria. Sections 4(a)(2) (A) and (B) of the Act provide for a payment of \$50,000 to individuals presumably exposed to fallout from the atmospheric detonation of nuclear devices at the Nevada Test Site due to their physical presence in an affected area during a designated time period, and later developed one or more specified compensable diseases.

#### § 79.21 Definitions.

(a) The definitions listed in § 79.11 apply to this subpart.

(b) *Specified compensable diseases* means leukemia, multiple myeloma, lymphomas (other than Hodgkin's disease), and primary cancer of the: Thyroid, female breast, esophagus, stomach, pharynx, small intestine, pancreas, bile ducts, gall bladder and liver.

(c) *Multiple myeloma, lymphoma, Hodgkin's disease, primary cancer of the thyroid, primary cancer of the female breast, primary cancer of the esophagus, primary cancer of the stomach, primary cancer of the pharynx, primary cancer of the small intestine, primary cancer of the pancreas, primary cancer of the bile ducts, primary cancer of the gall bladder and primary cancer of the liver means the physiological condition or conditions that are recognized by the National Cancer Institute under those names or nomenclature, or under any previously accepted or commonly used names or nomenclature.*

(d) *Heavy smoker* means an individual who smoked more than 20 pack years of any kind of tobacco cigarette products; one pack year is defined as an average of 20 cigarettes per day for one year. This definition does not include the use of cigars or pipe tobacco, or any tobacco products that are used without being lighted.

(e) *Heavy drinker* means an individual who consumed on average for five (5) years at least 4 drinks per day with one and one-half ounces of alcohol, or 4 six-ounce servings per day of wine, or four twelve-ounce servings per day of beer.

(f) *Heavy coffee drinker* means an individual who consumed on average more than 15 6-ounce portions of regular or decaffeinated coffee per day for twenty (20) years.

(g) *Indication of disease* means any medically significant information that suggests the presence of a disease, whether or not the presence of the disease is later confirmed.

#### § 79.22 Criteria for eligibility.

To establish eligibility for compensation under this subpart, a claimant or eligible surviving beneficiary must show by a preponderance of the evidence that each of the following criteria are satisfied:

§ 79.23

28 CFR Ch. I (7–1–98 Edition)

(a) The claimant was physically present in the affected area for either:

(1) A period of at least two years during the period beginning on January 21, 1951 and ending on October 31, 1958, OR

(2) The entire period beginning on June 30, 1962 and ending on July 31, 1962; and

(b) After such period of physical presence the claimant contracted one of the following specified compensable diseases:

(1) Leukemia, provided that:

(i) The claimant's initial exposure occurred after the age of 20, and

(ii) The onset of the disease was between 2 and 30 years after first exposure;

(2) Multiple myeloma, provided onset was at least 5 years after first exposure;

(3) Lymphomas, other than Hodgkin's disease, provided onset was at least 5 years after first exposure;

(4) Primary cancer of the thyroid, provided,

(i) The claimant's initial exposure occurred by the age of 20, and

(ii) Onset was at least 5 years after first exposure;

(5) Primary cancer of the female breast, provided,

(i) The claimant's initial exposure occurred prior to age 40, and

(ii) Onset was at least 5 years after first exposure;

(6) Primary cancer of the esophagus, provided,

(i) Onset was at least 5 years after first exposure, and

(ii) The claimant was not a heavy smoker, and

(iii) The claimant was not a heavy drinker;

(7) Primary cancer of the stomach, provided,

(i) Initial exposure occurred prior to age 30, and

(ii) Onset was at least 5 years after first exposure;

(8) Primary cancer of the pharynx, provided,

(i) Onset was at least 5 years after first exposure; and

(ii) The claimant was not a heavy smoker;

(9) Primary cancer of the small intestine, provided onset was at least 5 years after first exposure;

(10) Primary cancer of the pancreas, provided,

(i) Onset was at least 5 years after first exposure, and

(ii) The claimant was not a heavy smoker, and

(iii) The claimant was not a heavy coffee drinker;

(11) Primary cancer of the bile ducts, provided onset was at least 5 years after first exposure;

(12) Primary cancer of the gall bladder, provided onset was at least 5 years after first exposure;

(13) Primary cancer of the liver, provided,

(i) Onset was at least 5 years after first exposure, and

(ii) There is no indication of the presence of hepatitis B, and

(iii) There is no indication of the presence of cirrhosis.

**§ 79.23 Proof of physical presence.**

(a) For purposes of establishing eligibility under § 79.22(a)(1), the claimant must have been physically present in the affected area for a total of two years, consecutively or cumulatively, during the period beginning on January 21, 1951, and ending on October 31, 1958. For purposes of establishing eligibility under § 79.22(a)(2), the claimant must have been physically present within the affected area during the entire period beginning on June 30, 1962 and ending July 31, 1962.

(b) Proof of physical presence may be made in accordance with the provisions of § 79.13 (b) and (c). An individual who resided or was employed on a full-time basis within the affected area is presumed to have been physically present during the time period of residence or full-time employment.

(c) For purposes of establishing eligibility under § 79.22(a)(1), proof of residence at one or more addresses within the affected area at two different dates two (2) years or more apart and less than three (3) years apart, and between January 21, 1951 and October 31, 1958, will be presumed to establish physical presence for the necessary two year period.

(d) For purposes of establishing eligibility under § 79.22(a)(1), proof of full-time employment at one location within the affected area at two different



dates two (2) years or more apart and less than three (3) years apart, and between January 21, 1951 and October 31, 1958, will be presumed to establish physical presence for the necessary two year period.

(e) For purposes of establishing eligibility under § 79.22(a)(2), proof can be made in accordance with the provisions of § 79.13 (g), (h), and (i).

(f) A claimant who was a participant in any study for scientific purposes conducted by or under the auspices of any public office or agency, or university medical school, or whose immediate family member was a participant in any such study, need not submit proof of physical residence at the time the claim is filed. Proof can be made in accordance with the provisions of § 79.13(j).

**§ 79.24 Proof of initial or first exposure after age 20 for claims under § 79.22(b)(1), or before age 20 for claims under § 79.22(b)(4), or before age 40 for claims under § 79.22(b)(5), or before age 30 for claims under § 79.22(b)(7).**

(a) Proof of the claimant's date of birth must be established in accordance with the provisions of subpart B, § 79.14(a).

(b) Absent any indication to the contrary, the earliest date within the designated time period indicated on any records accepted by the Radiation Exposure Compensation Unit as proof of the claimant's physical presence in the affected area will be presumed to be the date of initial or first exposure.

**§ 79.25 Proof of onset of leukemia between two and thirty years after first exposure, and proof of onset of a specified compensable disease more than five years after first exposure.**

Absent any indication to the contrary, the earliest date within the designated time period indicated on any records accepted by the Radiation Exposure Compensation Unit as proof of the claimant's physical presence in the affected area will be presumed to be the date of first or initial exposure. The date of onset will be the date of diagnosis as indicated in the medical documentation accepted by the Radiation Exposure Compensation Unit as

proof of the claimant's specified compensable disease. In the case of leukemia, proof of onset shall be established in accordance with § 79.15.

**§ 79.26 Proof of medical condition.**

(a) Written medical documentation is required in all cases to prove that the claimant suffered from or suffers from any specified compensable disease. Proof that the claimant contracted a specified compensable disease must be made either by using the procedure outlined in paragraph (b) of this section or submitting the documentation required in paragraph (c) of this section. (For claims arising from a specified compensable disease listed in § 79.27 of these regulations, the claimant or eligible surviving beneficiary must also submit the additional written medical documentation prescribed in that section.)

(b) If a claimant was diagnosed as having one of the specified compensable diseases in the States of Arizona, Colorado, Nevada, New Mexico, Utah or Wyoming, the claimant or eligible surviving beneficiary need not submit any medical documentation of disease at the time the claim is filed (although written medical documentation may subsequently be required). Instead, the claimant or eligible surviving beneficiary must submit with the claim an Authorization To Release Medical and Other Information, valid in the state of diagnosis, that authorizes the Unit to contact the appropriate state cancer or tumor registry. The Unit will accept as proof of medical condition verification from the state cancer or tumor registry that it possesses medical records or abstracts of medical records of the claimant that contain a verified diagnosis of one of the specified compensable diseases. If the designated state does not possess medical records or abstracts of medical records that contain a verified diagnosis of one of the specified compensable diseases, the Unit will notify the claimant or eligible surviving beneficiary and afford that individual the opportunity to submit the written medical documentation required in paragraph (c) of this section, in accordance with the provisions of § 79.52(b).

(c) Proof that the claimant contracted a specified compensable disease may be made by the submission of one or more of the following contemporaneous medical records, provided that the specified document contains an explicit statement of diagnosis and such other information or data from which the appropriate authorities with the National Cancer Institute can make a diagnosis to a reasonable degree of medical certainty. If the medical record submitted does not contain sufficient information or data to make such a diagnosis, the Unit will notify the claimant or eligible surviving beneficiary and afford that individual the opportunity to submit additional medical records identified below, in accordance with the provisions of § 79.52(b). The medical documentation submitted under this section to establish that the claimant contracted leukemia or a lymphoma must also contain sufficient information from which the appropriate authorities with the National Cancer Institute can determine the type of leukemia or lymphoma contracted by the claimant. Proof of leukemia shall be made by submitting one or more of the documents listed in § 79.16(c).

(1) *Multiple myeloma.* (i) Pathology report of tissue biopsy;  
 (ii) Autopsy report;  
 (iii) Report of serum electrophoresis;  
 (iv) One of the following summary medical reports:  
 (A) Physician summary report;  
 (B) Hospital discharge summary report;  
 (C) Hematology summary or consultation report;  
 (D) Oncology summary or consultation report;  
 (E) X-ray report;  
 (v) Death certificate, provided that it is signed by a physician at the time of death.

(2) *Lymphomas.* (i) Pathology report of tissue biopsy;  
 (ii) Autopsy report;  
 (iii) One of the following summary medical reports:  
 (A) Physician summary report;  
 (B) Hospital discharge summary report;  
 (C) Hematology consultation or summary report;

(D) Oncology consultation or summary report;

(iv) Death certificate, provided that it is signed by a physician at the time of death.

(3) *Cancer of the thyroid.* (i) Pathology report of tissue biopsy or fine needle aspirate;

(ii) Autopsy report;

(iii) One of the following summary medical reports:

(A) Physician summary report;

(B) Hospital discharge summary;

(C) Operative summary report;

(D) Oncology summary or consultation report;

(iv) Death certificate, provided that it is signed by a physician at the time of death.

(4) *Cancer of the female breast.* (i) Pathology report of tissue biopsy or surgical resection;

(ii) Autopsy report;

(iii) One of the following summary medical reports:

(A) Physician summary report;

(B) Hospital discharge summary;

(C) Operative report;

(D) Oncology summary or consultation report;

(E) Radiotherapy summary or consultation report;

(iv) Report of mammogram;

(v) Report of bone scan;

(vi) Death certificate, provided that it is signed by a physician at the time of death.

(5) *Cancer of the esophagus.* (i) Pathology report of tissue biopsy or surgical resection;

(ii) Autopsy report;

(iii) Endoscopy report;

(iv) One of the following summary medical report:

(A) Physician summary report;

(B) Hospital discharge summary report;

(C) Operative report;

(D) Radiotherapy report;

(E) Oncology consultation or summary report;

(v) One of the following radiological studies:

(A) Esophagram;

(B) Barium swallow;

(C) Upper gastrointestinal (GI) series;

(D) Computerized tomography (CT) scan;

(E) Magnetic resonance imaging (MRI);

(vi) Death certificate, provided that it is signed by a physician at the time of death.

(6) *Cancer of the stomach.* (i) Pathology report of tissue biopsy or surgical resection;

(ii) Autopsy report;

(iii) Endoscopy or gastroscopy report;

(iv) One of the following summary medical reports:

(A) Physician summary report;

(B) Hospital discharge summary report;

(C) Operative report;

(D) Radiotherapy report;

(E) Oncology summary report;

(v) One of the following radiological studies:

(A) Barium swallow;

(B) Upper gastrointestinal (GI) series;

(C) Computerized tomography (CT) series;

(D) Magnetic resonance imaging (MRI);

(vi) Death certificate, provided that it is signed by a physician at the time of death.

(7) *Cancer of the pharynx.* (i) Pathology report of tissue biopsy or surgical resection;

(ii) Autopsy report;

(iii) Endoscopy report;

(iv) One of the following summary medical reports:

(A) Physician summary;

(B) Hospital discharge summary;

(C) Report of otolaryngology examination;

(D) Radiotherapy summary report;

(E) Oncology summary report;

(F) Operative report;

(v) Report of one of the following radiological studies:

(A) Laryngograms;

(B) Tomograms of soft tissue and lateral radiographs;

(C) Computerized tomography (CT) scan;

(D) Magnetic resonance imaging (MRI);

(vi) Death certificate, provided that it is signed by a physician at the time of death.

(8) *Cancer of the small intestine.* (i) Pathology report of tissue biopsy;

(ii) Autopsy report;

(iii) Endoscopy report, provided the examination covered the duodenum and parts of the jejunum;

(iv) Colonoscopy report, providing the examination covered the distal ileum;

(v) One of the following summary medical reports:

(A) Physician summary report;

(B) Hospital discharge summary;

(C) Report of gastroenterology examination;

(D) Operative report;

(E) Radiotherapy summary report;

(F) Oncology summary or consultation report;

(vi) Report of one of the following radiologic studies:

(A) Upper gastrointestinal (GI) series with small bowel followthrough;

(B) Angiography;

(C) Computerized tomography (CT) scan;

(D) Magnetic resonance imaging (MRI);

(vii) Death certificate, provided that it is signed by a physician at the time of death.

(9) *Cancer of the pancreas.* (i) Pathology report of tissue biopsy or fine needle aspirate;

(ii) Autopsy report;

(iii) One of the following summary medical reports:

(A) Physician summary report;

(B) Hospital discharge summary report;

(C) Radiotherapy summary report;

(D) Oncology summary report;

(iv) Report of one of the following radiographic studies:

(A) Endoscopic retrograde cholangiopancreatography (ERCP);

(B) Upper gastrointestinal (GI) series;

(C) Arteriography of the pancreas;

(D) Ultrasonography;

(E) Computerized tomography (CT) scan;

(F) Magnetic resonance imaging (MRI);

(v) Death certificate, provided that it is signed by a physician at the time of death.

(10) *Cancer of the bile duct.* (i) Pathology of tissue biopsy or surgical resection;

(ii) Autopsy report;

(iii) One of the following summary medical reports:

(A) Physician summary report;

(B) Hospital discharge summary report;

- (C) Operative report;
- (D) Gastroenterology consultation report;
- (E) Oncology summary or consultation report;
- (iv) Report of one of the following radiographic studies:
  - (A) Ultrasonography;
  - (B) Endoscopic retrograde cholangiography;
  - (C) Percutaneous cholangiography;
  - (D) Computerized tomography (CT) scan;
- (v) Death certificate, provided that it is signed by a physician at the time of death.
- (11) *Cancer of the gall bladder.* (i) Pathology report of tissue from surgical resection;
  - (ii) Autopsy report;
  - (iii) Report of one of the following radiological studies:
    - (A) Computerized tomography (CT) scan;
    - (B) Magnetic resonance imaging (MRI);
    - (C) Ultrasonography (ultrasound);
  - (iv) One of the following summary medical reports:
    - (A) Physician summary report;
    - (B) Hospital discharge summary report;
    - (C) Operative report;
    - (D) Radiotherapy report;
    - (E) Oncology summary or report;
  - (v) Death certificate, provided that it is signed by a physician at the time of death.
- (12) *Cancer of the liver.* (i) Pathology report of tissue biopsy or surgical resection;
  - (ii) Autopsy report;
  - (iii) One of the following summary medical reports:
    - (A) Physician summary report;
    - (B) Hospital discharge summary report;
    - (C) Oncology summary report;
    - (D) Operative report;
    - (E) Gastroenterology report;
  - (iv) Report of one of the following radiological studies:
    - (A) Computerized tomography (CT) scan;
    - (B) Magnetic resonance imaging (MRI);
  - (v) Death certificate, provided that it is signed by a physician at the time of death.

**§ 79.27 Proof of no heavy smoking, no heavy drinking, no heavy coffee drinking, and no indication of disease.**

(a) If the claimant or eligible surviving beneficiary is claiming eligibility under this subpart for primary cancer of the esophagus, stomach, pharynx, pancreas, or liver, the claimant or eligible surviving beneficiary must submit in addition to proof of the disease, all medical records listed below from any hospital or medical facility that were created within the period six (6) months before and six (6) months after the date of diagnosis:

- (1) All history and physical examination reports;
- (2) All operative reports;
- (3) All pathology reports;
- (4) All physician or hospital discharge summaries.

(b) If the medical records listed above, or the medical records possessed by the state cancer or tumor registry, contain information reflecting that the claimant was a heavy smoker or a heavy drinker, or establish that there was an indication of disease, the Radiation Exposure Compensation Unit will notify the claimant or eligible surviving beneficiary and afford that individual the opportunity to submit other written medical documentation or contemporaneous records to establish that the claimant was not a heavy smoker, not a heavy drinker, or that there was no indication of disease, in accordance with the provisions of § 79.52(b).

(c) In the case of primary cancer of the pancreas, the claimant or each eligible surviving beneficiary shall execute and provide an affidavit (or declaration under oath on the standard claim form) that sets forth the amount of regular or decaffeinated coffee that the claimant consumed on average per day for the twenty year period immediately prior to the date the claimant was diagnosed with primary cancer of the pancreas.

**Subpart D—Uranium Miners**

**§ 79.30 Scope of subpart.**

The regulations in this subpart define the eligibility criteria for compensation under section 5 of the Act, and the type and extent of evidence

that will be accepted as proof of the prescribed criteria. Section 5 of the Act provides for a payment of \$100,000 to individuals who contracted lung cancer or one of a limited number of non-malignant respiratory diseases following exposure to defined minimum levels of radiation during employment in a uranium mine or uranium mines in certain states during the period beginning January 1, 1947, and ending December 31, 1971.

**§ 79.31 Definitions.**

(a) *Employment in a uranium mine* means any mining-related activity at a uranium mine that principally occurred underground. These activities/occupations include, but are not limited to: miner, miner's helper (nipper), production driller, long hole driller, tram operator (trammer, or motor-man), equipment operator (mucker), slusher operator (slusherman), laborer (bull gang), powderman, timberman, hoistman, skip tender, underground truck driver (trucker), shift foreman (boss, shifter, or leadman), mechanic, electrician, geologist, surveyor, surveyor's helper (rodman), grade controller (prober), air sampler, safety engineer, and mine superintendent (super). Noncompany personnel performing the following activities/occupations include, but are not limited to: mine inspectors, health physicists, and Atomic Energy Commission (AEC) geologists and engineers.

(b) *Uranium mine* means an underground excavation, regardless of the means of access, the primary or significant purpose of which was the extraction of uranium ore. Strip, rim, or open pit mines are excluded.

(c) *Working Level* means any concentration of the short half-life daughters of radon that will release  $1.3 \times 10^5$  million electron volts of alpha energy per liter of air;

(d) *Working Level Month* means radiation exposure at the level of one working level every work day for a working month (170 hours), or an equivalent cumulative exposure over a greater or lesser amount of time.

(e) *Non-smoker* means an individual who never smoked tobacco cigarette products or smoked less than the amount defined in paragraph (f), below.

(f) *Smoker* means an individual who has smoked at least one (1) pack year of cigarette products.

(g) *Onset* or *incidence* means the date the disease was first diagnosed by a physician.

(h) *Primary lung cancer* means any physiological condition of the lung, trachea, and bronchus that is recognized under that name or nomenclature by the National Cancer Institute. The term excludes cancers *in situ*.

(i) *Nonmalignant respiratory disease* means any of the following:

(1) Pulmonary fibrosis, fibrosis of the lung, or

(2) Cor pulmonale related to fibrosis of the lung, or

(3) Moderate or severe silicosis or pneumoconiosis, provided that the claimant, whether an Indian or non-Indian,

(i) Worked in a uranium mine or mines located on or within an Indian Reservation, and

(ii) Worked in such a mine or mines for a period of time sufficient to meet the minimum working level criteria for the claimant set forth in § 79.32(c).

(j) *Fibrosis of the lung or pulmonary fibrosis* for purposes of the Act and these regulations means chronic inflammation and scarring of the pulmonary interstitium and alveoli with collagen deposition and progressive thickening causing pulmonary impairment.

(k) *Cor pulmonale* means heart disease, including hypertrophy of the right ventricle, due to pulmonary hypertension secondary to fibrosis of the lung.

(l) *Silicosis* means a pneumoconiosis due to the inhalation of the dust of stone, sand, flint or other materials containing silicon dioxide, characterized by the formation of pulmonary fibrotic changes.

(m) *Pneumoconiosis* means a chronic lung disease resulting from inhalation and deposition in the lung of particulate matter, and the tissue reaction to the presence of the particulate matter. For the purposes of this Act, the claimant's exposure to the particulate matter that led to the disease must have occurred during employment in a uranium mine.

(n) *Indian Reservation* means territory held in trust by the United States

## § 79.32

for any Indian Tribe at any time between January 1, 1947 and December 31, 1971.

(o) *Designated time period* means any time during the period beginning on January 1, 1947, and ending on December 31, 1971.

(p) *Specified States* means the states of Arizona, Colorado, New Mexico, Utah and Wyoming.

(q) *Readily available documentation* means documents in the possession, custody or control of the claimant or an immediate family member.

(r) *Certified "B" reader* means a physician who has demonstrated proficiency in evaluating chest roentgenograms (x-rays) for quality and for the presence of pneumoconiosis and other roentgenographic abnormalities and is certified (and recertified, as may be appropriate) by the National Institute for Occupational Safety and Health. A list of certified "B" readers is available from the Radiation Exposure Compensation Unit upon request.

### § 79.32 Criteria for eligibility.

To establish eligibility for compensation under this subpart, a claimant or eligible surviving beneficiary must show by a preponderance of the evidence that each of the following criteria are satisfied:

(a) The claimant was employed in a uranium mine or mines in the states of Arizona, Colorado, New Mexico, Wyoming or Utah;

(b) The Claimant was so employed during the period beginning on January 1, 1947 and ending on December 31, 1971;

(c) The claimant contracted primary lung cancer or a non-malignant respiratory disease, and

(1) If a non-smoker, the claimant was exposed during the course of his/her employment in a uranium mine to more than 200 working level months of radiation, or

(2) If a smoker, then

(i) If the incidence of the cancer or the non-malignant respiratory disease occurred before the age of 45, the claimant was exposed during the course of his/her employment in a uranium mine to more than 300 working level months of radiation; or

## 28 CFR Ch. I (7-1-98 Edition)

(ii) If the incidence of the cancer or the non-malignant respiratory disease occurred after the age of 45, the claimant was exposed during the course of his/her employment in a uranium mine to more than 500 working level months of radiation.

### § 79.33 Proof of employment in a uranium mine.

(a) Information regarding a claimant's uranium mining employment history contained in records held by any of the sources listed in this subsection will be accepted as proof of employment for the time period indicated on the records. The employment history for the time period indicated in the records is presumed to be correct. If the claimant or eligible surviving beneficiary contests the accuracy of the records specified in this subsection, then the claimant or eligible surviving beneficiary may provide one or more of the records identified in paragraph (b) of this section, and the Assistant Director will determine whether there is a preponderance of the evidence that the employment history from the records in this subsection is incorrect.

(1) Records created by or gathered by the Public Health Service (PHS) in the course of any health studies conducted of uranium miners during or including the period 1947-1971;

(2) Records of a uranium miner census performed by the PHS at various times during the period 1947-1971;

(3) Records of the Atomic Energy Commission (AEC), or any of its successor agencies; and

(4) Records of federally-supported health-related studies of uranium miners including;

(i) Studies conducted by Dr. Geno Saccamanno, M.D., St. Mary's Hospital, Grand Junction, Colorado;

(ii) Studies conducted by Dr. Jonathan Samet, M.D., University of New Mexico School of Medicine.

(b) If the sources in paragraph (a) of this section do not contain information on the claimant's uranium mining employment history, or contain insufficient employment history information to establish exposure to the number of working level months required for the claimant to qualify under the appropriate provision of § 79.32(c), a claimant

or eligible surviving beneficiary may submit records from any of the sources listed in paragraph (b)(1) of this section to establish periods of uranium mining employment in addition to the periods of employment established by the sources in paragraph (a) of this section.

(1) The claimant or eligible surviving beneficiary may submit:

(i) Records of any of the specified states, including records of state regulatory agencies, containing information on uranium miners and uranium mines;

(ii) Records of any business entity that owned or operated a uranium mine, or its successor-in-interest;

(iii) Records of the Social Security Administration reflecting the identity of the employer, the year and quarter of employment, and the wages received during each quarter;

(iv) Federal or state income tax records that contain appropriate statements regarding the claimant's employer and wages;

(v) Records containing factual findings by any governmental judicial body, state workers compensation board, or any governmental administrative body adjudicating the claimant's rights to any type of benefits; records from any such source will be accepted only to prove the fact of and duration of employment in a uranium mine;

(vi) Statements in medical records created between 1947 and 1971 indicating or identifying the claimant's employer and occupation;

(vii) Records of an academic or scholarly study, not conducted in anticipation of or in connection with any litigation, and completed prior to 1990; or

(viii) Any other contemporaneous record that indicates or identifies the claimant's occupation or employer.

(2) To the extent that the documents submitted from the sources identified in paragraph (b)(1) of this section do not so indicate, the claimant or eligible surviving beneficiary must set forth under oath on the standard claim form the following information, if known:

(i) The name or other identifying symbol of each mine in which the claimant worked during the time period identified in the documents;

(ii) The mining district, county and state in which each mine was located;

(iii) The actual time period he/she worked in each mine; and

(iv) The claimant's occupation in each mine.

(3) If records of the Unit indicate that any mine specified by the claimant or eligible surviving beneficiary was not an underground uranium mine, the claimant or eligible surviving beneficiary will be notified and afforded the opportunity to submit records to establish that the mine was an underground mine in accordance with § 79.52(c).

(4) If the claimant or eligible surviving beneficiary cannot provide under paragraph (b)(2) of this section, the name or location of any uranium mine at which the claimant was employed, then, if possible, this information will be determined by utilizing records reflecting the types of mines operated or owned by the entity for whom the claimant worked.

(i) If such records establish that the business for which the claimant worked owned or operated *only* underground uranium mines during the time period indicated in the records, the claimant will be presumed to have been employed in an underground uranium mine for the indicated time period;

(ii) If such records establish that the entity for which the claimant worked owned or operated predominantly underground uranium mines in the state and during the time period indicated in the records, the claimant will be presumed to have been employed in an underground uranium mine during this time period.

(iii) If such records establish that the entity for which the claimant worked owned or operated predominantly open pit, strip or rim mines in the state and during the time periods indicated in the records, the claimant may be presumed to have been employed in a rim, strip, or open pit mine.

(5) If the claimant or eligible surviving beneficiary cannot provide under paragraph (b)(2) of this section, the time period the claimant was employed in each uranium mine, the time period will be determined in the following manner:

(i) If records of the Social Security Administration exist which indicate

the claimant's work history, the period of employment will be estimated by dividing the gross quarterly income by the average pay rate per hour for the claimant's occupation;

(ii) If Social Security records do not exist, but other records exist which indicate that the claimant was employed in a uranium mine on the date recorded in the record, but do not indicate the period of employment, then the following presumptions shall be applied:

(A) If the records indicate that the claimant worked at the same mine or for the same uranium mining company on two different dates at least 3 months apart but less than 12 months apart, the claimant will be presumed to have been employed at the mine or for the mining company for the entire 12 month period beginning on the earlier date.

(B) If the records indicate that the claimant worked at the same mine or for the same uranium mining company on two different dates at least 1 month apart but less than 6 months apart, the claimant will be presumed to have been employed at the mine or for the mining company for the entire 6 month period beginning on the earlier date;

(C) If the records indicate that the claimant worked at any mine or for a uranium mining company on any date within the designated time period, but the claimant is not entitled to any of the presumptions listed above, the claimant will be presumed to have been employed at the mine or for the mining company for a 6 month period, three months before and three months after the date indicated.

(c) The Unit may, for the purpose of verifying information submitted pursuant to this section, require the claimant or any eligible surviving beneficiary to provide an authorization to release any record identified in this section, in accordance with the provisions of § 79.52(c).

**§ 79.34 Proof of working level month exposure to radiation.**

(a) If one or more of the sources in § 79.33(a) contain a calculated total of Working Level Months (WLMs) of radiation for the claimant equal to or greater than the number of WLMs required for the claimant to qualify

under the appropriate provision of § 79.32(c), the number will be presumed to be correct and the claimant or eligible surviving beneficiary need not submit additional records.

(b) If the sources in § 79.33(a) do not contain a calculated total of WLMs or radiation for the claimant, or contain a calculated total that is less than the criterion set forth in the appropriate provision of § 79.32(c), a claimant or eligible surviving beneficiary may submit records from the sources listed below which reflect a calculated number of WLMs of radiation for periods of employment established under § 79.33(b). If the number of WLMs established under this subsection, plus the number established under paragraph (a) of this section is equal to or greater than the number of WLMs required for the claimant to qualify under the appropriate provision of § 79.32(c), the claimant or eligible surviving beneficiary need not submit additional records.

(1) Certified copies of records of regulatory agencies of the specified states, provided that the records indicate the mines at which the claimant was employed, the time period of the claimant's employment in each mine, the exposure level in each mine during the claimant's employment, and the calculations on which the claimant's WLMs are based, unless the calculation is obvious;

(2) Certified copies of records of the owner or operator of a uranium mine in the specified states with the same provisions as noted in paragraph (b)(1) of this section.

(c) When the sources referred to in paragraphs (a) and (b) of this section contain a calculated number of WLMs, but the number is insufficient to meet the appropriate criterion in § 79.32(c), additional WLMs may be determined for remaining periods of employment established under § 79.33 (a) and (b) in the manner set forth in paragraphs (d) through (h) of this section.

(d) To the extent that the sources referred to in paragraphs (a) and (b) of this section do not contain a calculated number of WLMs, but do contain annual exposure levels measured in Working Levels (WLs) for mines in which the claimant was employed, then the claimant's exposure to radiation



measured in WLMs will be calculated in the manner set forth in paragraph (h) of this section.

(e) For periods of employment in an underground uranium mine established under § 79.33(b) (1) or (2) where paragraph (d) of this section is not applicable, the following sources will be used in computing the annual exposure level measured in WLs in each mine for the period of the claimant's employment set forth in paragraph (g) of this section.

(1) Records of the AEC, or its successor agencies;

(2) Records of the PHS, including radiation level measurements taken in the course of health studies conducted of uranium miners during or including the period 1947-1971;

(3) Records of the United States Bureau of Mines;

(4) Records of regulatory agencies of the specified states; or

(5) Records of the business entity that was the owner or operator of the mine.

(f) For periods of employment in an underground uranium mine established under § 79.33(b)(3), the annual exposure level measured in WLs in the unknown mine(s) will be determined by calculating an average of the annual exposure levels measured in WLs in all the underground uranium mines owned or operated by the entity for which the claimant worked during the appropriate time period and in the identified state.

(g) The following methodology will be employed for calculating the annual exposure level measured in WLs for each mine:

(1) If one or more radiation measurements are available for a mine in a given year, these values are averaged to generate the WLs for the mine for that year.

(2) If radiation measurements exist for the mine, but not for the year in which the claimant was employed in the mine, the WLs for the mine for that year will be estimated if possible as follows:

(A) If annual average measurements exist within four (4) years of the year in which the claimant was employed in the mine, the measurements for the two years closest will be averaged, and

that value will be assigned to the year the claimant was employed in the mine;

(B) If one or more annual average measurements exist for a mine, but are not more than five (5) years from the year the claimant was employed, the annual average closest in time will be assigned either forward or backward in time for two years.

(3) If the methods described in paragraph (g) (1) and (2) of this section interpolate or project the annual exposure level measured in WLs for a mine in a year in which the claimant was employed in the mine, an estimated average for mines in the same geographical area will be used for that year. An estimated area average is calculated as follows:

(A) If actual measurements from three or more mines, totaling at least ten measurements, are available from mines in the same locality as the mine in which the claimant was employed, the average of the measurements for the mines within that locality will be used.

(B) If there were insufficient actual measurements from mines in the same locality to use the method in paragraph (g)(3)(A) of this section, an average of exposure levels in mines in the same mining district will be used if there are at least ten measurements from at least three mines in that district.

(C) If there are insufficient actual measurements from mines in the same mining district, the average of exposure levels in mines in the same state will be used.

(D) If there are insufficient actual measurements from mines in the same state, the estimated average for the state of Colorado for that year will be used.

(4) If the year in which the claimant was employed in the mine was 1947 to 1949, the annual exposure level measured in WLs will be estimated by averaging the earliest recorded exposure levels in mines of the same or similar type, ventilation, and ore composition closest to the mine.

(h) A claimant's total exposure to radiation expressed in WLMs, for purposes of establishing eligibility under

§ 79.32(c), will be calculated in the following manner:

(1) The annual exposure level measured in WLs for each mine for periods of employment established under § 79.33(b) will be calculated by using the methodology in paragraph (f) of this section;

(2) The annual exposure level measured in WLs for each mine will be multiplied by the time period, measured in months, that the claimant was employed in the mine, yielding a claimant's exposure to radiation expressed in WLMs;

(3) The claimant's exposure to radiation expressed in WLMs for each mine in which the claimant was employed in one of the specified states during the designated time period will be added together to yield the claimant's total exposure to radiation expressed in WLMs.

**§ 79.35 Proof of lung cancer.**

(a) Written medical documentation is required in all cases to prove that the claimant developed primary cancer of the lung. Proof that the claimant developed primary cancer of the lung must be made either by using the procedure outlined in paragraphs (b), (c) or (d) of this section or submitting the documentation required in paragraph (e) of this section.

(b) *Verification by PHS or NIOSH records.* In all cases the Radiation Exposure Compensation Unit will search the records of the PHS or the National Institute for Occupational Safety and Health (NIOSH) created or gathered during the course of any health studies conducted or being conducted by these agencies of uranium miners during or including the period 1947–1971, to determine whether the records contain proof of the claimant's eligibility. The Unit will accept as proof of medical condition the verification of the PHS or NIOSH that they possess medical records or abstracts of medical records of the claimant that contain a verified diagnosis of lung cancer. If these agencies do not possess medical records or abstracts of medical records that contain a verified diagnosis of lung cancer, the Unit will notify the claimant or eligible surviving beneficiary and afford that individual the opportunity to sub-

mit the written medical documentation required in paragraph (e) of this section, in accordance with the provisions of § 79.52(b).

(c) *Verification by the State cancer or tumor registry.* If a claimant was diagnosed as having primary cancer of the lung in the States of Arizona, Colorado, Nevada, New Mexico, Utah, or Wyoming, the claimant or eligible surviving beneficiary need not submit any written medical documentation of medical condition at the time the claim is filed (although written medical documentation may subsequently be required). Instead, the claimant or eligible surviving beneficiary must submit with the claim an Authorization To Release Medical or Other Information, valid in the state of diagnosis, that authorizes the Radiation Exposure Compensation Unit to contact the appropriate state cancer or tumor registry. The Unit will accept as proof of medical condition verification from the state cancer or tumor registry that they possess medical records or abstracts of medical records of the claimant that contain a verified diagnosis of primary cancer of the lung. If the state does not possess medical records or abstracts of medical records that contain a verified diagnosis of primary cancer of the lung, the Unit will notify the claimant or eligible surviving beneficiary and afford that individual the opportunity to submit the written medical documentation required in paragraph (e) of this section, in accordance with the provisions of § 79.52(b).

(d) *Verification by a federally-supported health-related study.* If medical records regarding the claimant were gathered during the course of any federally-supported health-related study of uranium miners, the claimant or eligible surviving beneficiary need not submit any written medical documentation of medical condition at the time the claim is filed (although written medical documentation may subsequently be required). Instead, the claimant or eligible surviving beneficiary must submit with the claim an Authorization To Release Medical or Other Information, valid in the state of diagnosis, that authorizes the Unit to contact the custodian of the records of the study to

determine if proof of the claimant's eligibility is contained in the records of the study. The Unit will accept as proof of medical condition copies of medical records or abstracts of medical records of the claimant that contain a verified diagnosis of primary cancer of the lung. If the custodian does not possess medical records or abstracts of medical records that contain a verified diagnosis of primary cancer of the lung, the Unit will notify the claimant or eligible surviving beneficiary and afford that individual the opportunity to submit the written medical documentation required in paragraph (e) of this section, in accordance with the provisions of § 79.52(b).

(e) Proof that the claimant contracted primary lung cancer may be made by the submission of one or more of the following contemporaneous medical records, provided that the specified document contains an explicit statement of diagnosis or such other information or data from which the appropriate authorities at the National Cancer Institute can make a diagnosis to a reasonable degree of medical certainty.

(1) Pathology report of tissue biopsy, including, but not limited to specimens obtained by any of the following methods:

- (i) Surgical resection;
- (ii) Endoscopic endobronchial or transbronchial biopsy;
- (iii) Bronchial brushings and washings;
- (iv) Pleural fluid cytology;
- (v) Fine needle aspirate;
- (vi) Pleural biopsy;
- (vii) Sputum cytology;

(2) Autopsy report;

(3) Bronchoscopy report;

(4) One of the following summary medical reports:

- (i) Physician summary report;
- (ii) Hospital discharge summary report;
- (iii) Operative report;
- (iv) Radiation therapy summary report;
- (v) Oncology summary or consultation report;

(5) Reports of radiographic studies, including:

- (i) X-rays of the chest;
- (ii) Chest tomograms;

(iii) Computer-assisted tomography (CT);

(iv) Magnetic resonance imaging (MRI);

(6) Death certificate, provided that it is signed by a physician at the time of death.

#### **§ 79.36 Proof of non-malignant respiratory disease.**

(a) Written medical documentation is required in all cases to prove to a reasonable degree of medical certainty that the claimant developed a non-malignant respiratory disease. Proof that the claimant developed a non-malignant respiratory disease must be made either by using the procedure outlined in paragraphs (b) or (c) of this section, or submitting the documentation required in paragraph (d) of this section.

(b) *Verification by PHS or NIOSH records.* In all cases the Radiation Exposure Compensation Unit will follow the procedures set forth in § 79.35(b) to establish the claimant's eligibility based on the development of a non-malignant respiratory disease.

(c) *Verification by a federally-supported health-study.* The Unit will follow the procedures set forth in section 79.35(d) to establish the claimant's eligibility based on the development of a non-malignant respiratory disease.

(d) Proof that the claimant contracted a non-malignant respiratory disease may be made by the submission of the following contemporaneous medical records, provided that the specified document contains an explicit statement of diagnosis or such other information or data from which the appropriate authorities designated by the Surgeon General or NIOSH can make a diagnosis to a reasonable degree of medical certainty. For purposes of this section, a statement of diagnosis in any of the Indian Health Service records listed below of "restrictive lung disease" will be considered equivalent to a diagnosis of pulmonary fibrosis.

(1) Pulmonary fibrosis or fibrosis of the lung.

(i) If the claimant is deceased, one or more of the following medical records:

- (A) Pathology report of tissue biopsy;
- (B) Autopsy report;

(C) If x-rays exist, the x-rays *and* interpretive reports of the x-ray(s) by two certified “B” readers classifying the existence of fibrosis of Category 1/0 or higher according to the ILO 1980, or subsequent revisions;

(D) If no x-rays exist, an x-ray report;

(E) Physician summary report;

(F) Hospital discharge summary report;

(G) Hospital admitting report;

(H) Death certificate, provided that it is signed by a physician at the time of death.

(ii) If the claimant is alive, the following:

(A) *Chest x-rays.* A chest x-ray administered in accordance with standard techniques on full size film at quality 1 or 2, and interpretative reports of the x-ray by two certified “B” readers classifying the existence of fibrosis of category 1/0 or higher according to the ILO 1989, or subsequent revisions; *and* either:

(B) *Pulmonary function tests.* Pulmonary function tests consisting of three tracings recording the results of the forced expiratory volume in one second (FEV1) and the forced vital capacity (FVC) administered and reported in accordance with the Standardization of Spirometry—1987 Update by the American Thoracic Society, and reflecting values for FEV1 or FVC that are equal to or less than 75% of the predicted value for an individual of the claimant’s age, sex, and height, as set forth in the tables in appendix A of this part; or

(C) *Arterial blood-gas studies.* A blood-gas study administered at rest in a sitting position, or an exercise blood-gas test, and reflecting values equal to or less than the values set forth in the tables in appendix B of this part.

(2) *Cor pulmonale.* Proof of pulmonary fibrosis as prescribed in paragraph (d)(1) of this section and one or more of the following medical records:

(i) Right heart catheterization;

(ii) Cardiology summary or consultation report;

(iii) Electrocardiogram;

(iv) Echocardiogram;

(v) Physician summary report;

(vi) Hospital discharge report;

(vii) Autopsy report;

(viii) Report of physical examination;

(ix) Death certificate, provided that it is signed by a physician at the time of death.

(3) *Moderate or severe silicosis or pneumoconiosis.* To establish eligibility for compensation for silicosis or pneumoconiosis, a claimant or eligible surviving beneficiary must:

(i) Submit the same documentation as is prescribed in paragraph (d)(1) of this section for proof of pulmonary fibrosis; and

(ii) Submit proof of employment in a uranium mine on an Indian Reservation in accordance with the provisions of § 79.33. A claimant or eligible surviving beneficiary must establish that the claimant was employed in a uranium mine on an Indian reservation for a sufficient period of time to meet the exposure criteria set forth in § 79.32(c).

#### **§ 79.37 Proof of smoking, nonsmoking, and age.**

(a) The claimant or eligible surviving beneficiary must submit all medical records listed below from any hospital or medical facility that were created within the period six (6) months before and six (6) months after the date of diagnosis of lung cancer or the nonmalignant respiratory disease:

(1) All history and physical examination reports;

(2) All operative reports;

(3) All pathology reports;

(4) All physician or hospital discharge summaries.

(b) If the medical records listed in paragraph (a) of this section or the information possessed by the PHS, NIOSH, state authorities, or the custodian of a federally-supported health-related study contains information indicating that the claimant was a smoker, the Radiation Exposure Compensation Unit will notify the claimant or eligible surviving beneficiary and afford that individual the opportunity to submit other written medical documentation or contemporaneous records to establish that the claimant was not a smoker in accordance with the provisions of § 79.52(b).

## Subpart E—Eligibility Criteria for Claims by Onsite Participants

### § 79.40 Scope of subpart.

The regulations in this subpart describe the criteria for eligibility for compensation under section 4(a)(2)(C) of the Act, and define the type and extent of evidence that will be accepted as proof of the prescribed criteria. Section 4(a)(2)(C) of the Act provides for a payment of \$75,000 to individuals who participated onsite in the atmospheric detonation of a nuclear device, and later developed a specified compensable disease.

### § 79.41 Definitions.

(a) The definitions listed in §§ 79.11(e) and (f), 79.21(b) through (g) apply to this subpart.

(b) *First exposure* or *initial exposure* means the date on which the claimant first participated onsite in an atmospheric nuclear test.

(c) *Onsite* means physical presence above or within the official boundaries of any of the following locations:

(1) The Nevada Test Site, Nevada;

(2) The Pacific Test Sites (Bikini Atoll, Enewetak Atoll, Johnston Island, Christmas Island, the test site for the shot during Operation Wigwam, the test site for Shot Yucca during Operation Hardtack I, and the test sites for Shot Frigate Bird and Shot Swordfish during Operation Dominic I) and the official zone around each site from which non-test affiliated ships were excluded for security and safety purposes;

(3) The Trinity Test Site, New Mexico;

(4) The South Atlantic Test Site for Operation Argus and the official zone around the site from which non-test affiliated ships were excluded for security and safety purposes;

(5) Any designated location within a Naval Shipyard, Air Force Base, or other official government installation where ships, aircraft or other equipment used in an atmospheric nuclear detonation were decontaminated; or

(6) Any designated location used for the purpose of monitoring fallout from an atmospheric nuclear test conducted at the Nevada Test Site.

(d) *Participant* means

(1) An individual who was:

(i) A member of the armed forces;

(ii) A civilian employee or contractor employee of the Manhattan Engineer District, the Armed Forces Special Weapons Project, the Defense Atomic Support Agency, the Defense Nuclear Agency, the Department of Defense or its components or agencies or predecessor components or agencies;

(iii) An employee or contractor employee of the Atomic Energy Commission, the Energy Research and Development Administration or Department of Energy;

(iv) A member of the Federal Civil Defense Administration or the Office of Civil and Defense Mobilization; or

(v) A member of the U.S. Public Health Service; and

(2) Who:

(i) Performed duties within the identified operational area around each atmospheric nuclear test;

(ii) Participated in the decontamination of any ships, planes, or equipment used during the atmospheric nuclear test;

(iii) Performed duties as a cloud tracker or cloud sampler;

(iv) Served as a member of the garrison or maintenance forces on the atoll of Enewetak during June 21, 1951 through July 1, 1952; August 7, 1956 through August 7, 1957; or November 1, 1958 through April 30, 1959; or

(v) Performed duties as a member of a mobile radiological safety team monitoring the pattern of fallout from an atmospheric nuclear test.

(e) *Atmospheric detonation of a nuclear device* means only those tests conducted by the United States prior to January 1, 1963, as listed in paragraph (f) of this section.

(f) *Period of atmospheric nuclear testing* means the periods listed in this paragraph that are associated with each test operation, plus an additional six (6) month period thereafter:

(1) For Operation Trinity, the period July 16, 1945 through August 6, 1945:

Event name	Date	Location
Trinity .....	07/16/45	TTS.

(2) For Operation Crossroads, the period June 28, 1946 through August 31, 1946, for all activities other than the decontamination of ships involved in

Operation Crossroads; the period of atmospheric nuclear testing for the decontamination of ships involved in Operation Crossroads shall run from June 28, 1946 through November 30, 1948:

Able .....	07/01/46	Bikini.
Baker .....	07/25/46	Bikini.

(3) For Operation Sandstone, the period April 13, 1948 through May 20, 1948:

X-ray .....	04/15/48	Enewetak.
Yoke .....	05/01/48	Enewetak.
Zebra .....	05/15/48	Enewetak.

(4) For Operation Ranger, the period January 27, 1951 through February 7, 1951:

Able .....	01/27/51	NTS.
Baker .....	01/28/51	NTS.
Easy .....	02/01/51	NTS.
Baker-2 .....	02/02/51	NTS.
Fox .....	02/06/51	NTS.

(5) For Operation Greenhouse, the period April 5, 1951 through June 20, 1951, for all activities other than service as a member of the garrison or maintenance forces on the atoll of Enewetak during June 21, 1951, and July 1, 1952; the period of atmospheric nuclear testing for service as a member of the garrison or maintenance forces on the atoll of Enewetak shall run from April 5, 1951, through July 1, 1952:

Dog .....	04/08/51	Enewetak.
Easy .....	04/21/51	Enewetak.
George .....	05/09/51	Enewetak.
Item .....	05/25/51	Enewetak.

(6) For Operation Buster-Jangle, the period October 22, 1951 through December 20, 1951:

Able .....	10/22/51	NTS.
Baker .....	10/28/51	NTS.
Charlie .....	10/30/51	NTS.
Dog .....	11/01/51	NTS.
Sugar .....	11/19/51	NTS.
Uncle .....	11/29/51	NTS.

(7) For Operation Tumbler-Snapper, the period April 1, 1952 through June 20, 1952:

Able .....	04/01/52	NTS.
Baker .....	04/15/52	NTS.
Charlie .....	04/22/52	NTS.
Dog .....	05/01/52	NTS.
Easy .....	05/07/52	NTS.
Fox .....	05/25/52	NTS.
George .....	06/01/52	NTS.

(8) For Operation Ivy, the period of October 29, 1952 through December 31, 1952:

Mike .....	11/01/52	Enewetak.
King .....	11/16/52	Enewetak.

(9) For Operation Upshot-Knothole, the period March 17, 1953 through June 20, 1953:

Annie .....	03/17/53	NTS.
Nancy .....	03/24/53	NTS.
Ruth .....	03/31/53	NTS.
Dixie .....	04/06/53	NTS.
Ray .....	04/11/53	NTS.
Badger .....	04/18/53	NTS.
Simon .....	04/25/53	NTS.
Encore .....	05/08/53	NTS.
Harry .....	05/19/53	NTS.
Grable .....	05/25/53	NTS.
Climax .....	06/04/53	NTS.

(10) For Operation Castle, the period February 27, 1954 through May 31, 1954:

Bravo .....	03/01/54	Bikini.
Romeo .....	03/27/54	Bikini.
Koon .....	04/07/54	Bikini.
Union .....	04/26/54	Bikini.
Yankee .....	05/05/54	Bikini.
Nectar .....	05/14/54	Enewetak.

(11) For Operation Teapot, the period February 18, 1955 through June 10, 1955:

Wasp .....	02/18/55	NTS.
Moth .....	02/22/55	NTS.
Tesla .....	03/01/55	NTS.
Turk .....	03/07/55	NTS.
Hornet .....	03/12/55	NTS.
Bee .....	03/22/55	NTS.
Ess .....	03/23/55	NTS.
Apple-1 .....	03/29/55	NTS.
Wasp Prime .....	03/29/55	NTS.
Ha .....	04/06/55	NTS.
Post .....	04/09/55	NTS.
Met .....	04/15/55	NTS.
Apple-2 .....	05/05/55	NTS.
Zucchini .....	05/15/55	NTS.

(12) For Operation Wigwam, the period May 14, 1955 through May 15, 1955:

Wigwam .....	05/14/55	Pacific.
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(13) For Operation Redwing, the period May 2, 1956 through August 6, 1956, for all activities other than service as a member of the garrison or maintenance forces on the atoll of Enewetak from August 7, 1956, through August 7, 1957; the period of atmospheric nuclear testing for service as a member of the garrison or maintenance forces on the

## Department of Justice

§ 79.41

atoll of Enewetak shall run from May 2, 1956, through August 7, 1957:

Lacrosse .....	05/05/56	Enewetak.
Cherokee .....	05/21/56	Bikini.
Zuni .....	05/28/56	Bikini.
Yuma .....	05/28/56	Enewetak.
Erie .....	05/31/56	Enewetak.
Seminole .....	06/06/56	Enewetak.
Flathead .....	06/12/56	Bikini.
Blackfoot .....	06/12/56	Enewetak.
Kickapoo .....	06/14/56	Enewetak.
Osage .....	06/16/56	Enewetak.
Inca .....	06/22/56	Enewetak.
Dakota .....	06/26/56	Bikini.
Mohawk .....	07/03/56	Enewetak.
Apache .....	07/09/56	Enewetak.
Navajo .....	07/11/56	Bikini.
Tewa .....	07/21/56	Bikini.
Huron .....	07/22/56	Enewetak.

(14) For Operation Plumbbob, the period May 28, 1957 through October 22, 1957:

Boltzmann .....	05/28/57	NTS.
Franklin .....	06/02/57	NTS.
Lassen .....	06/05/57	NTS.
Wilson .....	06/18/57	NTS.
Priscilla .....	06/24/57	NTS.
Hood .....	07/05/57	NTS.
Diablo .....	07/15/57	NTS.
John .....	07/19/57	NTS.
Kepler .....	07/24/57	NTS.
Owens .....	07/25/57	NTS.
Stokes .....	08/07/57	NTS.
Shasta .....	08/18/57	NTS.
Doppler .....	08/23/57	NTS.
Franklin Prime .....	08/30/57	NTS.
Smoky .....	08/31/57	NTS.
Galileo .....	09/02/57	NTS.
Wheeler .....	09/06/57	NTS.
Laplace .....	09/08/57	NTS.
Fizeau .....	09/14/57	NTS.
Newton .....	09/16/57	NTS.
Whitney .....	09/23/57	NTS.
Charleston .....	09/28/57	NTS.
Morgan .....	10/07/57	NTS.

(15) For Operation Hardtack I, the period April 26, 1958 through October 31, 1958, for all activities other than service as a member of the garrison or maintenance forces on the atoll of Enewetak from November 1, 1958, through April 30, 1959; the period of atmospheric nuclear testing for service as a member of the garrison of maintenance forces on the atoll of Enewetak shall run from April 26, 1958, through April 30, 1959:

Yucca .....	04/28/58	Pacific.
Cactus .....	05/06/58	Enewetak.
Fir .....	05/12/58	Bikini.

Butternut .....	05/12/58	Enewetak.
Koa .....	05/13/58	Enewetak.
Wahoo .....	05/16/58	Enewetak.
Holly .....	05/21/58	Enewetak.
Nutmeg .....	05/22/58	Bikini.
Yellowwood .....	05/26/58	Enewetak.
Magnolia .....	05/27/58	Enewetak.
Tobacco .....	05/30/58	Enewetak.
Sycamore .....	05/31/58	Bikini.
Rose .....	06/03/58	Enewetak.
Umbrella .....	06/09/58	Enewetak.
Maple .....	06/11/58	Bikini.
Aspen .....	06/15/58	Bikini.
Walnut .....	06/15/58	Enewetak.
Linden .....	06/18/58	Enewetak.
Redwood .....	06/28/58	Bikini.
Elder .....	06/28/58	Enewetak.
Oak .....	06/29/58	Enewetak.
Hickory .....	06/29/58	Bikini.
Sequoia .....	07/02/58	Enewetak.
Cedar .....	07/03/58	Bikini.
Dogwood .....	07/06/58	Enewetak.
Poplar .....	07/12/58	Bikini.
Scaevola .....	07/14/58	Enewetak.
Pisonia .....	07/18/58	Enewetak.
Juniper .....	07/22/58	Bikini.
Olive .....	07/23/58	Enewetak.
Pine .....	07/27/58	Enewetak.
Teak .....	07/31/58	Johnston Isl.
Quince .....	08/06/58	Enewetak.
Orange .....	08/11/58	Johnston Isl.
Fig .....	08/18/58	Enewetak.

(16) For Operation Argus, the period August 25, 1958 through September 10, 1958:

Argus I .....	08/27/58	South Atlantic.
Argus II .....	08/30/58	South Atlantic.
Argus III .....	09/06/58	South Atlantic.

(17) For Operation Hardtack II, the period September 19, 1958 through October 31, 1958;

Eddy .....	09/19/58	NTS.
Mora .....	09/29/58	NTS.
Quay .....	10/10/58	NTS.
Lea .....	10/13/58	NTS.
Hamilton .....	10/15/58	NTS.
Dona Ana .....	10/16/58	NTS.
Rio Arriba .....	10/18/58	NTS.
Socorro .....	10/22/58	NTS.
Wrangell .....	10/22/58	NTS.
Rushmore .....	10/22/58	NTS.
Sanford .....	10/26/58	NTS.
De Baca .....	10/26/58	NTS.
Humboldt .....	10/29/58	NTS.
Mazama .....	10/29/58	NTS.
Sante Fe .....	10/30/58	NTS.

(18) For Operation Dominic I, the period April 23, 1962 through December 31, 1962;

Adobe .....	04/25/62	Christmas Isl.
Aztec .....	04/27/62	Christmas Isl.

## § 79.42

Arkansas .....	05/02/62	Christmas Isl.
Questa .....	05/04/62	Christmas Isl.
Frigate Bird .....	05/06/62	Pacific.
Yukon .....	05/08/62	Christmas Isl.
Mesilla .....	05/09/62	Christmas Isl.
Muskegon .....	05/11/62	Christmas Isl.
Swordfish .....	05/11/62	Pacific.
Encino .....	05/12/62	Christmas Isl.
Swanee .....	05/14/62	Christmas Isl.
Chetco .....	05/19/62	Christmas Isl.
Tanana .....	05/25/62	Christmas Isl.
Nambe .....	05/27/62	Christmas Isl.
Alma .....	06/08/62	Christmas Isl.
Truckee .....	06/09/62	Christmas Isl.
Yeso .....	06/10/62	Christmas Isl.
Harlem .....	06/12/62	Christmas Isl.
Rinconada .....	06/15/62	Christmas Isl.
Dulce .....	06/17/62	Christmas Isl.
Petit .....	06/19/62	Christmas Isl.
Otowi .....	06/22/62	Christmas Isl.
Bighorn .....	06/27/62	Christmas Isl.
Bluestone .....	06/30/62	Christmas Isl.
Starfish .....	07/08/62	Johnston Isl.
Sunset .....	07/10/62	Christmas Isl.
Pamlico .....	07/11/62	Christmas Isl.
Androscoffin .....	10/02/62	Johnston Isl.
Bumping .....	10/06/62	Johnston Isl.
Chama .....	10/18/62	Johnston Isl.
Checkmate .....	10/19/62	Johnston Isl.
Bluegill .....	10/25/62	Johnston Isl.
Calamity .....	10/27/62	Johnston Isl.
Housatonic .....	10/30/62	Johnston Isl.
Kingfish .....	11/01/62	Johnston Isl.
Tightrope .....	11/03/62	Johnston Isl.

(19) For Operation Dominic II, the period July 7, 1962 through August 15, 1962;

Little Feller II .....	07/07/62	NTS.
Johnnie Boy .....	07/11/62	NTS.
Small Boy .....	07/14/62	NTS.
Little Feller I .....	07/17/62	NTS.

(20) For Operation Plowshare, the period of July 6, 1962, through July 7, 1962, covering Project Sedan.

## § 79.42 Eligibility criteria.

To establish eligibility for compensation under this subpart, a claimant or eligible surviving beneficiary must show, by a preponderance of the evidence, that each of the following criteria are satisfied:

(a) The claimant was present onsite at any time during a period of atmospheric nuclear testing;

(b) The claimant was a participant during that period in the atmospheric detonation of a nuclear device; and

(c) The claimant contracted one (or more) of the specified compensable diseases listed in § 79.22(b).

## 28 CFR Ch. I (7-1-98 Edition)

## § 79.43 Proof of participation onsite during a period of atmospheric nuclear testing.

(a) Claimants associated with the Department of Defense (DoD) Components or DoD contractors.

(1) A claimant or eligible surviving beneficiary who alleges that the claimant was present onsite during a period of atmospheric nuclear testing as a member of the armed forces or an employee or contractor employee of the DoD, or any of its components or agencies, must submit the following information on the claim form:

(i) Claimant's name;

(ii) Claimant's military service number;

(iii) Claimant's social security number;

(iv) The site at which the claimant participated in an atmospheric nuclear test;

(v) The name or number of the claimant's military organization or unit assignment at the time of his/her participation onsite;

(vi) The dates of the claimant's assignment onsite;

(vii) As full and complete a description as possible of the claimant's official duties, responsibilities and activities while an onsite participant.

(2) A claimant or eligible surviving beneficiary under this section need not submit any additional documentation of onsite participation during an atmospheric nuclear test at the time the claim is filed; however, additional documentation may be required as set forth in paragraph (a)(3).

(3) Upon receipt of a claim under this subpart that contains the information set forth in paragraph (a)(1), the Radiation Exposure Compensation Unit will forward the information to the Defense Nuclear Agency (DNA) of the DoD and request that the DNA conduct a search of its records for the purpose of gathering facts relating to the claimant's presence onsite and participation in an atmospheric nuclear test. If the facts gathered by the DNA are insufficient to establish the eligibility criteria in section 79.42 of these regulations, the claimant or eligible surviving beneficiary will be notified and afforded the



## Department of Justice

## § 79.46

opportunity to submit military, government, or business records in accordance with the procedure set forth in § 79.52(c).

(b) Claimants associated with AEC and Department of Energy (DOE) Components or Contractors or members of the Federal Civil Defense Administration and the Office of Civil and Defense Mobilization.

(1) A claimant or eligible surviving beneficiary who alleges that the claimant was present onsite during an atmospheric nuclear test as an employee of the AEC, the DOE, or any of their components, agencies or offices, or as an employee of a contractor of the AEC, or DOE, or as a member of the Federal Civil Defense or the Office of Civil and Defense Mobilization must submit the following information on the claim form:

- (i) Claimant's name;
- (ii) Claimant's social security number;
- (iii) The site at which the claimant participated in an atmospheric nuclear test;
- (iv) The name or other identifying information associated with the claimant's organization, unit, assignment or employer at the time of their participation onsite;
- (v) The dates of the claimant's assignment onsite;
- (vi) As full and complete a description as possible of the claimant's official duties, responsibilities and activities while an onsite participant.

(2) A claimant or eligible surviving beneficiary under this section need not submit any additional documentation of presence onsite during an atmospheric nuclear test at the time the claim is filed; however, additional documentation may be required as set forth in paragraph (b)(3) of this section.

(3) Upon receipt of a claim under this subpart that contains the information set forth in paragraph (b)(1) of this section, the Radiation Exposure Compensation Unit will forward the information to the Nevada Field Office of the Department of Energy (DOE/NV) and request that the DOE conduct a search of its records for the purpose of gathering facts relating to the claimant's presence onsite and participation in an atmospheric nuclear test. If the

facts gathered by the DOE/NV are insufficient to establish the eligibility criteria in § 79.42 of these regulations, the claimant or eligible surviving beneficiary will be notified and afforded the opportunity to submit military, government, or business records in accordance with the procedure set forth in § 79.52(c).

### § 79.44 Proof of medical condition.

Proof of medical condition under this subpart will be made in the same manner, and according to the same procedures and limitations, as are set forth in the provisions of § 79.16 and § 79.26.

### § 79.45 Proof of initial or first exposure after age 20 for the condition listed in § 79.22(b)(1), or before age 20 for the condition listed in § 79.22(b)(4), or before age 40 for the condition listed in § 79.22(b)(5), or before age 30 for the condition listed in § 79.22(b)(7).

(a) Proof of the claimant's date of birth must be established in accordance with the provisions of § 79.14(a).

(b) Absent any indication to the contrary, the earliest date of onsite participation indicated on any records accepted by the Radiation Exposure Compensation Unit as proof of the claimant's onsite participation will be presumed to be the date of initial or first exposure.

### § 79.46 Proof of onset of leukemia between two and thirty years after first exposure, and proof of onset of a specified compensable disease more than five years after first exposure.

Absent any indication to the contrary, the earliest date of onsite participation indicated on any records accepted by the Radiation Exposure Compensation Unit as proof of the claimant's onsite participation will be presumed to be the date of first or initial exposure. The date of onset will be the date of diagnosis as indicated on the medical documentation accepted by the Radiation Exposure Compensation Unit as proof of the specified compensable disease. Proof of the onset of leukemia shall be established in accordance with § 79.11(e).

**§ 79.47 Proof of no heavy smoking, no heavy drinking, no heavy coffee drinking, and no indication of disease.**

Proof of the claimant's smoking, drinking, and coffee drinking, and the existence of an indication of disease under this subpart must be established in accordance with the provisions of § 79.27.

**Subpart F—Procedures**

**§ 79.50 Attorney General's delegation of authority.**

(a) An Assistant Director within the Constitutional and Specialized Tort Staff, Torts Branch, Civil Division, shall be assigned to manage the Radiation Exposure Compensation Program and issue a decision on each claim filed under the Act, and otherwise act on behalf of the Attorney General in all other matters relating to the administration of the Program.

(b) The Assistant Attorney General, Civil Division, or the official designated by him to act on his behalf (the Appeals Officer), shall act on appeals from the Assistant Director's decisions.

**§ 79.51 Filing of claims.**

(a) All claims for compensation under the Act must be in writing and submitted on a standard form designated by the Assistant Director for the filing of compensation claims. Except as specifically provided in these regulations, the claimant or eligible surviving beneficiary must furnish the written medical documentation required by these regulations with his/her standard form. Except as specifically provided in these regulations, the claimant or eligible surviving beneficiary must also provide with the standard form records establishing his/her physical presence in an affected area, employment in an uranium mine, or onsite participation, in accordance with these regulations. The standard form must be completed, signed under oath either by a person eligible to file a claim under the Act or by that person's legal guardian, and mailed with supporting documentation to the following address: Radiation Exposure Compensation Program, U.S. Depart-

ment of Justice, P.O. Box 146, Ben Franklin Station, Washington, DC 20044-0146.

Copies of the standard form, as well as the regulations, guidelines and other information may be obtained by requesting the document or publications from the Assistant Director at the address indicated above.

(b) A claim will be filed after receipt of the standard form with supporting documentation and examination for substantial compliance with these regulations. The date of filing shall be recorded by a stamp on the face of the standard form. The Assistant Director shall only file claims which substantially comply with § 79.51(a) of these regulations. Claims which substantially fail to comply with the aforementioned section shall be promptly returned unfiled to the sender with a statement identifying the reasons why the claim does not comply with the regulations. The sender may return the claim to the Assistant Director after correcting the deficiencies. For those cases that are filed, the Assistant Director shall promptly acknowledge receipt of the claim with a letter identifying the number assigned to the claim, the date the claim was filed, and the period within which the Assistant Director must act on the claim.

(c) The following persons or their legal guardians are eligible to file claims for compensation under the Act in the order listed below:

- (1) The claimant;
- (2) If the claimant is deceased, the spouse of the claimant;
- (3) If there is no surviving spouse, a child of the claimant;
- (4) If there is no surviving spouse or child, a parent of the claimant;
- (5) If there is no surviving spouse, child or parent, a grandchild of the claimant; or
- (6) If there is no surviving spouse, child, parent or grandchild, a grandparent of the claimant.

(d) The identity of the claimant must be established by submitting a birth certificate, or one of the documents identified in § 79.14(a) of these regulations when the person has no birth certificate.

(e) The spouse of a claimant must establish his/her eligibility to file a claim by furnishing:

- (1) His/her birth certificate;
- (2) The birth and death certificates of the claimant;
- (3) One of the following documents to establish a marriage to the claimant;
  - (i) The public record of marriage;
  - (ii) A certificate of marriage;
  - (iii) The religious record of marriage;
- or
- (iv) A judicial or other governmental determination that a valid marriage existed, such as the final opinion or order of a probate court or a determination of the Social Security Administration that the claimant is the spouse of the decedent; and

(4) An affidavit (or declaration under oath on the standard claim form) stating that the spouse was married to the claimant for at least one year immediately prior to the claimant's death.

(5) If the spouse is a member of an Indian Tribe, he/she need not provide any of the documents listed above at the time the claim is filed (although these records may later be required), but instead should furnish a signed release of private information which will be used by the Assistant Director to obtain a statement of verification of all of the information listed above directly from the tribal records custodian.

(f) A child of a claimant must establish his/her eligibility to file a claim by furnishing:

- (1) His/her birth certificate;
- (2) The birth and death certificates of the claimant;
- (3) One of the documents listed in paragraph (e)(3) of this section to establish each marriage to the claimant (if applicable);
- (4) A death certificate or divorce decree for each spouse of the claimant (if applicable);
- (5) A death certificate for each of the other children of the claimant (if applicable);
- (6) An affidavit (or declaration under oath on the standard claim form) stating the following:
  - (i) That the claimant was never married, *or*, if the claimant was ever married, the name of each spouse, the date each marriage began and ended, and

the date and place of divorce or death of the last spouse of the claimant; and

- (ii) That the claimant had no other children, *or*, if the claimant did have other children, the name of each child, the date and place of birth of each child, and the date and place of death or current address of each child; and

(7) One of the following:

- (i) In the case of a natural child, a birth certificate showing that the claimant was the child's parent, or a judicial decree identifying the claimant as the child's parent;

- (ii) In the case of an adopted child, the judicial decree of adoption;

- (iii) In the case of a step child, evidence of birth to the spouse of the claimant as outlined above, and records which reflect that the step child lived with the claimant in a regular parent-child relationship.

(8) If the child is a member of an Indian Tribe, he/she need not provide any of the documents listed above at the time the claim is filed (although these records may later be required), but instead should furnish a signed release of private information which will be used by the Assistant Director to obtain a statement of verification of all of the information listed above from the tribal records custodian.

(g) A parent of a claimant must establish his/her eligibility to file a claim by furnishing:

- (1) His/her birth certificate;
- (2) The birth and death certificates of the claimant;
- (3) One of the documents listed in paragraph (e)(3) of this section to establish each marriage to the claimant (if applicable);
- (4) A death certificate or divorce decree for each spouse of the claimant (if applicable);
- (5) A death certificate for each child of the claimant (if applicable);
- (6) A death certificate for the other parent(s) (if applicable);
- (7) An affidavit (or declaration under oath on the standard claim form) stating the following:
  - (i) That the claimant was never married, *or*, if the claimant was ever married, the name of each spouse, the date each marriage began and ended, and the date and place of divorce or death of the last spouse of the claimant; and

(ii) That the claimant had no children, *or*, if the claimant did have children, the name of each child, the date and place of birth of each child, and the date and place of death of each child;

(iii) The name and address, or date and place of death, of the other parent(s) of the claimant; and

(8) One of the following:

(i) In the case of a natural parent, a birth certificate showing that the claimant was the parent's child, or a judicial decree identifying the claimant as the parent's child;

(ii) In the case of an adoptive parent, the judicial decree of adoption;

(9) If the parent is a member of an Indian Tribe, he/she need not provide any of the documents listed above at the time the claim is filed (although these records may later be required), but instead should furnish a signed release of private information which will be used by the Assistant Director to obtain a statement of verification of all of the information listed above from the tribal records custodian.

(h) A grandchild of a claimant must establish his/her eligibility to file a claim by furnishing:

(1) His/her birth certificate;

(2) The birth and death certificates of the claimant;

(3) One of the documents listed in paragraph (e)(3) of this section to establish each marriage to the claimant (if applicable);

(4) A death certificate or divorce decree for each spouse of the claimant (if applicable);

(5) A death certificate for each child of the claimant;

(6) A death certificate for each parent of the claimant;

(7) A death certificate for each of the other grandchildren of the claimant (if applicable);

(8) An affidavit (or declaration under oath on the standard claim form) stating the following:

(i) That the claimant was never married, *or*, if the claimant was ever married, the name of each spouse, the date each marriage began and ended, and the date and place of divorce or death of the last spouse of the claimant;

(ii) The name of each child, the date and place of birth of each child, and the date and place of death of each child;

(iii) The names of each parent of the claimant together with the dates and places of death of each parent; and

(iv) That the claimant had no other grandchildren, *or*, if the claimant did have other grandchildren, the name of each grandchild, the date and place of birth of each grandchild, and the date and place of death or current address of each child; and

(9) One of the following:

(i) In the case of a natural grandchild, a combination of birth certificates showing that the claimant was the grandchild's grandparent;

(ii) In the case of an adopted grandchild, a combination of judicial records and birth certificates showing that the claimant was the grandchild's grandparent;

(iii) In the case of a step grandchild, evidence of birth to the spouse of the child of the claimant, as outlined above, and records which reflect that the step child lived with a child of the claimant in a regular parent-child relationship;

(10) If the grandchild is a member of an Indian Tribe, he/she need not provide any of the documents listed above at the time the claim is filed (although these records may later be required), but instead should furnish a signed release of private information which will be used by the Assistant Director to obtain a statement of verification of all of the information listed above from the tribal records custodian.

(i) A grandparent of the claimant must establish his/her eligibility to file a claim by furnishing:

(1) His/her birth certificate;

(2) The birth and death certificates of the claimant,

(3) One of the documents listed in subsection (e)(3) above to establish each marriage to the claimant (if applicable);

(4) A death certificate or divorce decree for each spouse of the claimant (if applicable);

(5) A death certificate for each child of the claimant (if applicable);

(6) A death certificate for each parent of the claimant;

(7) A death certificate for each grandchild of the claimant (if applicable);

(8) A death certificate for each of the other grandparents of the claimant (if applicable);

(9) An affidavit stating the following:

(i) That the claimant was never married, *or* if the claimant was ever married, the name of each spouse, the date each marriage began and ended, and the date and place of divorce or death of the last spouse of the claimant;

(ii) That the claimant had no children, *or*, if the claimant did have children, the name of each child, the date and place of birth of each child, and the date and place of death of each child;

(iii) The names of each parent of the claimant together with the dates and places of death of each parent;

(iv) That the claimant had no grandchildren, *or*, if the claimant did have grandchildren, the name of each grandchild, the date and place of birth of each grandchild, and the date and place of death of each grandchild; and

(v) The names of all other grandparents of the claimant together with the dates and places of birth of each grandparent, and the dates and places of death of each other grandparent or the current address of each other grandparent; and

(10) One of the following:

(i) In the case of a natural grandparent, a combination of birth certificates showing that the claimant was the grandparent's grandchild;

(ii) In the case of an adoptive grandparent, a combination of judicial records showing that the claimant was the grandparent's grandchild;

(11) If the grandchild is a member of an Indian Tribe, he/she need not provide any of the documents listed above at the time the claim is filed (although these records may later be required), but instead should furnish a signed release of private information which will be used by the Assistant Director to obtain a statement of verification of all of the information listed above from the tribal records custodian.

(j) A claim that was filed and denied may be filed again in those cases where the claimant or eligible surviving beneficiary obtains documentation he/she did not possess when the claim was previously filed that establishes:

- (1) An injury specified in the Act,
- (2) Residency in the affected area,

(3) Onsite participation in a nuclear test, or

(4) Exposure to a defined minimum level of radiation in a uranium mine or mines during a designated time period.

However, a claimant or eligible surviving beneficiary may not file a claim more than three times.

#### **§ 79.52 Review and resolution of claims.**

(a) *Initial review.* The Assistant Director shall conduct an initial review of each claim that has been filed to determine whether:

(1) The person submitting the claim appears to be an eligible surviving beneficiary, in those cases where the claimant is deceased;

(2) The medical condition identified in the claim is a disease specified in the Act for which the claimant or eligible surviving beneficiary could recover compensation;

(3) For claims submitted under subparts B and C of this part, the period or place of physical presence set forth in the claim falls within the designated time period or affected areas identified in section 79.11;

(4) For claims submitted under subpart D of this part, the period or place of uranium mining set forth in the claim falls within the designated time period or specified states identified in § 79.31;

(5) For claims submitted under subpart E, the place and period of onsite participation set forth in the claim falls within the places and times set forth in §§ 79.41 (c) and (f).

If the Assistant Director determines from the initial review that any one of the applicable criteria is not met, or that any other criteria of the regulations is not met, she shall so advise the claimant or eligible surviving beneficiary in writing setting forth the reasons for his determination and provide the claimant or eligible surviving beneficiary sixty days from the date of his letter to correct the deficiency. If the claimant or eligible surviving beneficiary fails to adequately correct the deficiency within the sixty day period, the Assistant Director shall issue a Decision denying the claim without further review.

(b) *Review of written medical documentation.* If necessary, the Assistant Director will examine the written medical documentation submitted in support of the claim and determine whether it meets the requirements of the regulations and satisfies the criteria for eligibility established by the Act and the regulations. The Assistant Director may, for the purposes of verifying such eligibility, require the claimant or eligible surviving beneficiary to provide an authorization to release any medical record identified in these regulations. If the Assistant Director determines that the documentation does not meet the requirements of the regulations, or does not satisfy the criteria for eligibility established by the Act and the regulations, he shall so advise the claimant or eligible beneficiary in writing setting forth the reasons for his determination and provide the claimant or eligible beneficiary sixty days from the date of his letter, or such greater period as he permits, to furnish additional written medical documentation which meets the requirements of the Act and the regulations. Where appropriate, the Assistant Director may require the claimant or eligible beneficiary to provide an authorization to release additional records as an alternative to, or in addition to, the claimant furnishing such additional records. If the claimant or eligible beneficiary fails to provide sufficient written medical documentation, or a valid release when requested by the Assistant Director, within sixty days, or the greater period approved by the Assistant Director, then the Assistant Director shall issue a Decision denying the claim without further review.

(c) *Review of the records.* If necessary, the Assistant Director will examine the other records submitted in support of the claim to prove those matters set forth in all other sections of the Act and the regulations, and determine whether such records meet the requirements of the regulations satisfy all other criteria for eligibility established by the statute and the regulations. The Assistant Director may, for the purposes of verifying such eligibility, require the claimant or eligible surviving beneficiary to provide an authorization to release any record identified in

these regulations. If the Assistant Director determines that the records do not meet the requirements of the regulations, or does not satisfy the criteria for eligibility established by the Act and the regulations, he shall so advise the claimant or eligible surviving beneficiary in writing setting forth the reasons for his determination and provide the claimant or eligible surviving beneficiary sixty days from the date of this letter, or such greater period as he permits, to furnish additional records which meet the requirements of the Act and the regulations. Where appropriate, the Assistant Director may require the claimant or eligible surviving beneficiary to provide an authorization to release additional records as an alternative to, or in addition to, the claimant or eligible beneficiary furnishing such additional records. If the claimant or eligible beneficiary fails to provide sufficient records, or a valid release when requested by the Assistant Director, within sixty days, or the greater period approved by the Assistant Director, then the Assistant Director shall issue a Decision denying the claim without further review.

(d) *Decision.* The Assistant Director shall review each claim and issue a written decision on each claim within twelve months of the date the claim was filed. Any decision denying a claim shall set forth reasons for denial and also indicate that the decision of the Assistant Director may be appealed to the Assistant Attorney General, Civil Division, in writing within sixty days from the date of the decision, or such greater period as may be permitted by the Assistant Director, and identify the address to written appeal should be sent.

#### **§ 79.53 Appeals procedures.**

(a) An appeal must be in writing, and must be received by the Radiation Exposure Compensation Unit within sixty days of the date of the decision denying the claim. Appeals must be sent to the following address: Radiation Exposure Compensation Program, Appeal of Decision, U.S. Department of Justice, P.O. Box 146, Ben Franklin Station, Washington, DC 20044-0146.

(b) The claimant or eligible surviving beneficiary may set forth in the appeal

the reason why he/she believes that the decision of the Assistant Director is incorrect, but may not submit new written medical documentation or other records to the Assistant Attorney General that were not provided to the Assistant Director before he issued his decision.

(c) Upon receipt of an appeal, the Radiation Exposure Compensation Unit shall forward the appeal, the decision, the claim and all supporting documentation to the Assistant Attorney General, of the Appeals Officer if one is designated, for action on the appeal. If the claim was not received within the sixty day period, the appeal may be denied without further review.

(d) The Assistant Attorney General or Appeals Officer shall review the appeal and other information forwarded by the Unit. After such review, the Assistant Attorney General or Appeals Officer shall issue a Memorandum which shall either affirm or reverse the Assistant Director's decision, or when appropriate, remand the claim to the Assistant Director for further action, and shall include a statement of the reasons for such reversal, affirmance, or remand. The Memorandum and all papers relating to the claim shall be returned to the Radiation Exposure Compensation Unit which shall promptly inform the claimant or eligible surviving beneficiary of the action of the Assistant Attorney General or Appeals Officer. A Memorandum affirming or reversing the Assistant Director's decision shall be deemed to be the final action of the Department of Justice on the claim.

#### **§ 79.54 Attorneys.**

(a) A claimant or eligible beneficiary need not be represented by an attorney to file a claim under the Act or receive payment under the Program. To the extent permitted by the resources available to administer the Program, the Assistant Director may provide assistance through the Radiation Exposure Compensation Unit to all persons who file claims for compensation under the Act, or may establish a priority of assistance.

(b) If the claimant or eligible surviving beneficiary desires to be represented, then the attorney selected by

the claimant or eligible surviving beneficiary shall file with the Assistant Director a written statement that he/she is a member in good standing of the bar of the highest court of a state, and is authorized to represent the particular person on whose behalf he/she acts.

(c) The total compensation payable to the attorney by the claimant or eligible surviving beneficiary may not exceed ten percent of the amount of the payment to that person.

#### **§ 79.55 Procedures for payment of claims.**

(a) Payment shall be made to the claimant, or to the legal guardian of the claimant, unless the claimant is deceased at the time of the payment. In cases involving a claimant who is deceased, payment shall be made to an eligible surviving beneficiary, or to the legal guardian acting on behalf of the eligible surviving beneficiary, in accordance with the terms and conditions specified in section 6(c)(4)(A) of the Act.

(b) In cases involving the approval of a claim, the Assistant Director shall take all necessary and appropriate steps to determine the correct amount of any offset to be made to the amount awarded under the Act, and to verify the identity of the claimant or the existence of eligible surviving beneficiaries who are entitled by the Act to receive the payment the claimant would have received. The Assistant Director may conduct any investigation, require any claimant or eligible surviving beneficiary to provide or execute any affidavit, record, or document, or authorize the release of any information as the Assistant Director deems necessary to ensure that the compensation payment is made in the correct amount and to the correct person(s). If the claimant or eligible surviving beneficiary fails or refuses to execute an affidavit or release of information, or provide a record or document requested, or fails to provide access to information, such failure or refusal may be deemed to be a rejection of the payment, unless the claimant or eligible surviving beneficiary of the claimant does not have and cannot obtain the legal authority to provide, release, or

authorize access to the required information, records, or documents.

(c) Prior to authorizing payment, the Assistant Director shall require the claimant or each eligible surviving beneficiary of a claim filed under subparts B, C, or D of these regulations to execute and provide an affidavit (or declaration under oath on the standard claim form) setting forth the amount of any payment made pursuant to a final award or settlement a claim (other than a claim for worker's compensation), against any person, that is based on injuries incurred by the claimant for which his/her claim under the Radiation Exposure Compensation Act was submitted. For purposes of this subsection, a "claim" includes, but is not limited to, any request or demand for money made or sought in a civil action, or made or sought in anticipation of the filing of a civil action, but shall not include requests or demands made pursuant to a life insurance or health insurance contract. If any such award or settlement payment was made, the Assistant Director shall subtract the sum of such award or settlement payments from the payment to be made under the Act.

(d) In the case of a claim filed under subpart E of this part, the Assistant Director shall require the claimant or each eligible surviving beneficiary to execute and provide an affidavit (or declaration under oath on the standard claim form) setting forth the amount of any payment made pursuant to a final award or settlement on a claim against any person, or any payment by the Federal Government, that is based on injuries incurred by the claimant for which his/her claim under the Radiation Exposure Compensation Act was submitted. For purposes of this subsection, a "claim" includes, but is not limited to, any request or demand for money made or sought in a civil action, or made or sought in anticipation of a civil action, but shall not include requests or demands made pursuant to a life or health insurance contract.

(1) Payments by the Federal Government shall include:

(i) Any disability payments of compensation benefits paid to the claimant and his/her dependents while the claimant is alive; and

(ii) Any Social Security payments of Dependency and Indemnity Compensation payments made to survivors due to death related to the illness for which the claim under the Act is submitted.

(2) Payments by the Federal Government shall not include:

(i) Active duty pay, retired pay, retainer pay, or payments under the Survivor Benefits Plan;

(ii) Death gratuity;

(iii) SGLI, VGLI, or mortgage, life or health insurance payments;

(iv) Burial benefits or reimbursement for burial expenses;

(v) Loans or loan guarantees;

(vi) Education benefits and payments;

(vii) Vocational rehabilitation benefits and payments;

(viii) Medical, hospital and dental benefits; or

(ix) Commissary and PX privileges.

(3) If any such award, settlement or Federal payment was made, the Assistant Director shall calculate the actuarial present value of such payments, and subtract the actuarial present value from the payment to be made under the Act. The actuarial present value shall be calculated using the worksheet attached as appendix C of this part in the following manner:

(i) *Step 1.* Enter the sum of the past payments received in each year in the appropriate rows in column (2). Additional rows will be added as needed to calculate present value of payments received in the years prior to 1960 and after 1990.

(ii) *Step 2.* Enter the present CPI-U (to be obtained monthly from the Bureau of Labor Statistics, Department of Labor) in column (3).

(iii) *Step 3.* Enter the CPI (Major Expenditure Classes—All Items) for each year in which payments were received in the appropriate row in column (4). (These measures are provided for 1960 through 1990. The measures for subsequent years will be obtained from the Bureau of Labor Statistics.)

(iv) *Step 4.* For each row, multiply the amount in column (2) by the corresponding inflator (column (3) divided by column (4)) and enter the product in column (5).



(v) *Step 5.* Add the products in column (5) and enter the sum on the line labelled "Total of column (5) equals actuarial present value of past payments."

(vi) *Step 6.* Subtract the total in Step 5 from the statutory payment of \$75,000 and enter the remainder on the line labelled "Net Claim Owed To Claimant."

(e) When the Assistant Director has verified the identity of the claimant or each eligible surviving beneficiary who is entitled to the compensation payment, or to a share of the compensation payment, and determined the correct amount of the payment or the share of the payment, he shall notify the claimant or each eligible surviving beneficiary, or his/her legal guardian, and require such person(s) to sign an Acceptance of Payment Form. Such form shall be signed and returned within sixty days of the date of the form or such greater period as may be allowed by the Assistant Director. Failure to return the signed form within the required time may be deemed to be a rejection of the payment. Signing and returning the form within the required time shall constitute acceptance of the payment, unless the individual who has signed the form dies prior to receiving the actual payment, in which case the person who possesses the payment

shall return it to the Assistant Director for redetermination of the correct disbursement of the payment.

(f) Rejected compensation payments, or shares of compensation payments, shall not be distributed to other eligible surviving beneficiaries, but shall be returned to the Trust Fund for use in paying other claims.

(g) Upon receipt of the Acceptance of Payment Form, the Assistant Director and the Director or Deputy Director of the Constitutional and Specialized Tort Staff, Torts Branch, Civil Division, shall authorize the appropriate authorities to issue a check to the claimant or each surviving eligible beneficiary who has accepted payment out of the funds appropriated for this purpose.

(h) Multiple payments:

(1) No claimant may receive payment under more than one subpart of these regulations for illnesses he/she contracted. In addition to one payment for his/her illnesses, he/she may also receive one payment for each claimant for whom he/she qualifies as an eligible surviving beneficiary.

(2) An eligible surviving beneficiary, who is not also a claimant, may receive one payment for each claimant for whom he/she qualifies as an eligible surviving beneficiary.

APPENDIX A TO PART 79—PULMONARY FUNCTION TABLES  
TABLE 1: MALES FVC—75 PERCENT OF PREDICTED; KNUDSON 1983

Height	Ages 35 to 53									
	35	37	39	41	43	45	47	49	51	53
56.0	1.64	1.59	1.55	1.50	1.46	1.41	1.37	1.32	1.28	1.23
56.5	1.72	1.67	1.63	1.58	1.54	1.49	1.45	1.40	1.36	1.31
57.0	1.80	1.75	1.71	1.66	1.62	1.57	1.53	1.48	1.44	1.39
57.5	1.88	1.83	1.79	1.74	1.70	1.65	1.61	1.56	1.52	1.47
58.0	1.96	1.91	1.87	1.82	1.78	1.73	1.69	1.64	1.60	1.55
58.5	2.04	1.99	1.95	1.90	1.86	1.81	1.77	1.72	1.68	1.63
59.0	2.12	2.07	2.03	1.98	1.94	1.89	1.85	1.80	1.76	1.72
59.5	2.20	2.15	2.11	2.06	2.02	1.97	1.93	1.89	1.84	1.80
60.0	2.28	2.23	2.19	2.14	2.10	2.05	2.01	1.97	1.92	1.88
60.5	2.36	2.31	2.27	2.22	2.18	2.14	2.09	2.05	2.00	1.96
61.0	2.44	2.39	2.35	2.31	2.26	2.22	2.17	2.13	2.08	2.04
61.5	2.52	2.47	2.43	2.39	2.34	2.30	2.25	2.21	2.16	2.12
62.0	2.60	2.56	2.51	2.47	2.42	2.38	2.33	2.29	2.24	2.20
62.5	2.68	2.64	2.59	2.55	2.50	2.46	2.41	2.37	2.32	2.28
63.0	2.76	2.72	2.67	2.63	2.58	2.54	2.49	2.45	2.40	2.36
63.5	2.84	2.80	2.75	2.71	2.66	2.62	2.57	2.53	2.48	2.44
64.0	2.92	2.88	2.83	2.79	2.74	2.70	2.65	2.61	2.56	2.52
64.5	3.00	2.96	2.91	2.87	2.82	2.78	2.73	2.69	2.64	2.60
65.0	3.08	3.04	2.99	2.95	2.90	2.86	2.81	2.77	2.72	2.68
65.5	3.16	3.12	3.07	3.03	2.98	2.94	2.89	2.85	2.81	2.76
66.0	3.24	3.20	3.15	3.11	3.06	3.02	2.97	2.93	2.89	2.84
66.5	3.32	3.28	3.23	3.19	3.14	3.10	3.06	3.01	2.97	2.92
67.0	3.40	3.36	3.31	3.27	3.22	3.18	3.14	3.09	3.05	3.00
67.5	3.48	3.44	3.39	3.35	3.31	3.26	3.22	3.17	3.13	3.08
68.0	3.56	3.52	3.48	3.43	3.39	3.34	3.30	3.25	3.21	3.16
68.5	3.64	3.60	3.56	3.51	3.47	3.42	3.38	3.33	3.29	3.24
69.0	3.73	3.68	3.64	3.59	3.55	3.50	3.46	3.41	3.37	3.32
69.5	3.81	3.76	3.72	3.67	3.63	3.58	3.54	3.49	3.45	3.40
70.0	3.89	3.84	3.80	3.75	3.71	3.66	3.62	3.57	3.53	3.48
70.5	3.97	3.92	3.88	3.83	3.79	3.74	3.70	3.65	3.61	3.56
71.0	4.05	4.00	3.96	3.91	3.87	3.82	3.78	3.73	3.69	3.64
71.5	4.13	4.08	4.04	3.99	3.95	3.90	3.86	3.81	3.77	3.73
72.0	4.21	4.16	4.12	4.07	4.03	3.98	3.94	3.89	3.85	3.81
72.5	4.29	4.24	4.20	4.15	4.11	4.06	4.02	3.98	3.93	3.89
73.0	4.37	4.32	4.28	4.23	4.19	4.14	4.10	4.06	4.01	3.97
73.5	4.45	4.40	4.36	4.31	4.27	4.23	4.18	4.14	4.09	4.05
74.0	4.53	4.48	4.44	4.40	4.35	4.31	4.26	4.22	4.17	4.13
74.5	4.61	4.56	4.52	4.48	4.43	4.39	4.34	4.30	4.25	4.21
75.0	4.69	4.65	4.60	4.56	4.51	4.47	4.42	4.38	4.33	4.29
75.5	4.77	4.73	4.68	4.64	4.59	4.55	4.50	4.46	4.41	4.37
76.0	4.85	4.81	4.76	4.72	4.67	4.63	4.58	4.54	4.49	4.45
76.5	4.93	4.89	4.84	4.80	4.75	4.71	4.66	4.62	4.57	4.53
77.0	5.01	4.97	4.92	4.88	4.83	4.79	4.74	4.70	4.65	4.61

Department of Justice

Pt. 79, App. A

77.5	5.09	5.05	5.00	4.96	4.91	4.87	4.82	4.78	4.73	4.69
78.0	5.17	5.13	5.08	5.04	4.99	4.95	4.90	4.86	4.81	4.77
78.5	5.25	5.21	5.16	5.12	5.07	5.03	4.98	4.94	4.90	4.85
79.0	5.33	5.29	5.24	5.20	5.15	5.11	5.06	5.02	4.98	4.93
79.5	5.41	5.37	5.32	5.28	5.23	5.19	5.15	5.10	5.06	5.01
80.0	5.49	5.45	5.40	5.36	5.32	5.27	5.23	5.18	5.14	5.09
80.5	5.57	5.53	5.48	5.44	5.40	5.35	5.31	5.26	5.22	5.17
81.0	5.65	5.61	5.57	5.52	5.48	5.43	5.39	5.34	5.30	5.25
81.5	5.74	5.69	5.65	5.60	5.56	5.51	5.47	5.42	5.38	5.33
82.0	5.82	5.77	5.73	5.68	5.64	5.59	5.55	5.50	5.46	5.41
82.5	5.90	5.85	5.81	5.76	5.72	5.67	5.63	5.58	5.54	5.49
83.0	5.98	5.93	5.89	5.84	5.80	5.75	5.71	5.66	5.62	5.57
83.5	6.06	6.01	5.97	5.92	5.88	5.83	5.79	5.74	5.70	5.65
84.0	6.14	6.09	6.05	6.00	5.96	5.91	5.87	5.82	5.78	5.73
84.5	6.22	6.17	6.13	6.08	6.04	5.99	5.95	5.90	5.86	5.82
85.0	6.30	6.26	6.21	6.16	6.12	6.07	6.03	5.98	5.94	5.90

TABLE 1a: MALES FVC—75 PERCENT OF PREDICTED; KNUDSON 1983

Height	Ages 55 to 75										
	55	57	59	61	63	65	67	69	71	73	75
56.0 ....	1.19	1.14	1.10	1.05	1.01	0.96	0.92	0.88	0.83	0.79	0.74
56.5 ....	1.27	1.22	1.18	1.13	1.09	1.05	1.00	0.96	0.91	0.87	0.82
57.0 ....	1.35	1.30	1.26	1.21	1.17	1.13	1.08	1.04	0.99	0.95	0.90
57.5 ....	1.43	1.38	1.34	1.30	1.25	1.21	1.16	1.12	1.07	1.03	0.98
58.0 ....	1.51	1.47	1.42	1.38	1.33	1.29	1.24	1.20	1.15	1.11	1.06
58.5 ....	1.59	1.55	1.50	1.46	1.41	1.37	1.32	1.28	1.23	1.19	1.14
59.0 ....	1.67	1.63	1.58	1.54	1.49	1.45	1.40	1.36	1.31	1.27	1.22
59.5 ....	1.75	1.71	1.66	1.62	1.57	1.53	1.48	1.44	1.39	1.35	1.30
60.0 ....	1.83	1.79	1.74	1.70	1.65	1.61	1.56	1.52	1.47	1.43	1.38
60.5 ....	1.91	1.87	1.82	1.78	1.73	1.69	1.64	1.60	1.55	1.51	1.46
61.0 ....	1.99	1.95	1.90	1.86	1.81	1.77	1.72	1.68	1.63	1.59	1.55
61.5 ....	2.07	2.03	1.98	1.94	1.89	1.85	1.80	1.76	1.71	1.67	1.63
62.0 ....	2.15	2.11	2.06	2.02	1.97	1.93	1.88	1.84	1.80	1.75	1.71
62.5 ....	2.23	2.19	2.14	2.10	2.05	2.01	1.97	1.92	1.88	1.83	1.79
63.0 ....	2.31	2.27	2.22	2.18	2.13	2.09	2.05	2.00	1.96	1.91	1.87
63.5 ....	2.39	2.35	2.30	2.26	2.22	2.17	2.13	2.08	2.04	1.99	1.95
64.0 ....	2.47	2.43	2.39	2.34	2.30	2.25	2.21	2.16	2.12	2.07	2.03
64.5 ....	2.55	2.51	2.47	2.42	2.38	2.33	2.29	2.24	2.20	2.15	2.11
65.0 ....	2.64	2.59	2.55	2.50	2.46	2.41	2.37	2.32	2.28	2.23	2.19
65.5 ....	2.72	2.67	2.63	2.58	2.54	2.49	2.45	2.40	2.36	2.31	2.27
66.0 ....	2.80	2.75	2.71	2.66	2.62	2.57	2.53	2.48	2.44	2.39	2.35
66.5 ....	2.88	2.83	2.79	2.74	2.70	2.65	2.61	2.56	2.52	2.47	2.43
67.0 ....	2.96	2.91	2.87	2.82	2.78	2.73	2.69	2.64	2.60	2.55	2.51
67.5 ....	3.04	2.99	2.95	2.90	2.86	2.81	2.77	2.72	2.68	2.63	2.59
68.0 ....	3.12	3.07	3.03	2.98	2.94	2.89	2.85	2.80	2.76	2.72	2.67
68.5 ....	3.20	3.15	3.11	3.06	3.02	2.97	2.93	2.89	2.84	2.80	2.75
69.0 ....	3.28	3.23	3.19	3.14	3.10	3.05	3.01	2.97	2.92	2.88	2.83
69.5 ....	3.36	3.31	3.27	3.22	3.18	3.14	3.09	3.05	3.00	2.96	2.91
70.0 ....	3.44	3.39	3.35	3.31	3.26	3.22	3.17	3.13	3.08	3.04	2.99
70.5 ....	3.52	3.47	3.43	3.39	3.34	3.30	3.25	3.21	3.16	3.12	3.07
71.0 ....	3.60	3.56	3.51	3.47	3.42	3.38	3.33	3.29	3.24	3.20	3.15
71.5 ....	3.68	3.64	3.59	3.55	3.50	3.46	3.41	3.37	3.32	3.28	3.23
72.0 ....	3.76	3.72	3.67	3.63	3.58	3.54	3.49	3.45	3.40	3.36	3.31
72.5 ....	3.84	3.80	3.75	3.71	3.66	3.62	3.57	3.53	3.48	3.44	3.39
73.0 ....	3.92	3.88	3.83	3.79	3.74	3.70	3.65	3.61	3.56	3.52	3.47
73.5 ....	4.00	3.96	3.91	3.87	3.82	3.78	3.73	3.69	3.64	3.60	3.55
74.0 ....	4.08	4.04	3.99	3.95	3.90	3.86	3.81	3.77	3.72	3.68	3.64
74.5 ....	4.16	4.12	4.07	4.03	3.98	3.94	3.89	3.85	3.81	3.76	3.72
75.0 ....	4.24	4.20	4.15	4.11	4.06	4.02	3.97	3.93	3.89	3.84	3.80
75.5 ....	4.32	4.28	4.23	4.19	4.14	4.10	4.06	4.01	3.97	3.92	3.88
76.0 ....	4.40	4.36	4.31	4.27	4.23	4.18	4.14	4.09	4.05	4.00	3.96
76.5 ....	4.48	4.44	4.39	4.35	4.31	4.26	4.22	4.17	4.13	4.08	4.04
77.0 ....	4.56	4.52	4.48	4.43	4.39	4.34	4.30	4.25	4.21	4.16	4.12
77.5 ....	4.65	4.60	4.56	4.51	4.47	4.42	4.38	4.33	4.29	4.24	4.20
78.0 ....	4.73	4.68	4.64	4.59	4.55	4.50	4.46	4.41	4.37	4.32	4.28
78.5 ....	4.81	4.76	4.72	4.67	4.63	4.58	4.54	4.49	4.45	4.40	4.36
79.0 ....	4.89	4.84	4.80	4.75	4.71	4.66	4.62	4.57	4.53	4.48	4.44
79.5 ....	4.97	4.92	4.88	4.83	4.79	4.74	4.70	4.65	4.61	4.56	4.52
80.0 ....	5.05	5.00	4.96	4.91	4.87	4.82	4.78	4.73	4.69	4.64	4.60
80.5 ....	5.13	5.08	5.04	4.99	4.95	4.90	4.86	4.81	4.77	4.73	4.68
81.0 ....	5.21	5.16	5.12	5.07	5.03	4.98	4.94	4.89	4.85	4.81	4.76
81.5 ....	5.29	5.24	5.20	5.15	5.11	5.06	5.02	4.98	4.93	4.89	4.84
82.0 ....	5.37	5.32	5.28	5.23	5.19	5.15	5.10	5.06	5.01	4.97	4.92
82.5 ....	5.45	5.40	5.36	5.31	5.27	5.23	5.18	5.14	5.09	5.05	5.00
83.0 ....	5.53	5.48	5.44	5.40	5.35	5.31	5.26	5.22	5.17	5.13	5.08
83.5 ....	5.61	5.56	5.52	5.48	5.43	5.39	5.34	5.30	5.25	5.21	5.16
84.0 ....	5.69	5.65	5.60	5.56	5.51	5.47	5.42	5.38	5.33	5.29	5.24
84.5 ....	5.77	5.73	5.68	5.64	5.59	5.55	5.50	5.46	5.41	5.37	5.32
85.0 ....	5.85	5.81	5.76	5.72	5.67	5.63	5.58	5.54	5.49	5.45	5.40

TABLE 2: MALES FEV1—75 PERCENT OF PREDICTED; KNUDSON 1983

Height	Ages 35 to 53									
	35	37	39	41	43	45	47	49	51	53
56.0	1.44	1.40	1.35	1.31	1.27	1.22	1.18	1.14	1.09	1.05
56.5	1.51	1.46	1.42	1.37	1.33	1.29	1.24	1.20	1.15	1.11
57.0	1.57	1.52	1.48	1.44	1.39	1.35	1.31	1.26	1.22	1.17
57.5	1.63	1.59	1.54	1.50	1.46	1.41	1.37	1.33	1.28	1.24
58.0	1.70	1.65	1.61	1.56	1.52	1.48	1.43	1.39	1.34	1.30
58.5	1.76	1.71	1.67	1.63	1.58	1.54	1.50	1.45	1.41	1.36
59.0	1.82	1.78	1.73	1.69	1.65	1.60	1.56	1.52	1.47	1.43
59.5	1.89	1.84	1.80	1.75	1.71	1.67	1.62	1.58	1.53	1.49
60.0	1.95	1.90	1.86	1.82	1.77	1.73	1.69	1.64	1.60	1.55
60.5	2.01	1.97	1.92	1.88	1.84	1.79	1.75	1.71	1.66	1.62
61.0	2.08	2.03	1.99	1.94	1.90	1.86	1.81	1.77	1.72	1.68
61.5	2.14	2.09	2.05	2.01	1.96	1.92	1.88	1.83	1.79	1.74
62.0	2.20	2.16	2.11	2.07	2.03	1.98	1.94	1.90	1.85	1.81
62.5	2.27	2.22	2.18	2.13	2.09	2.05	2.00	1.96	1.91	1.87
63.0	2.33	2.28	2.24	2.20	2.15	2.11	2.07	2.02	1.98	1.93
63.5	2.39	2.35	2.30	2.26	2.22	2.17	2.13	2.09	2.04	2.00
64.0	2.46	2.41	2.37	2.32	2.28	2.24	2.19	2.15	2.10	2.06
64.5	2.52	2.47	2.43	2.39	2.34	2.30	2.26	2.21	2.17	2.12
65.0	2.58	2.54	2.49	2.45	2.41	2.36	2.32	2.28	2.23	2.19
65.5	2.65	2.60	2.56	2.51	2.47	2.43	2.38	2.34	2.29	2.25
66.0	2.71	2.66	2.62	2.58	2.53	2.49	2.45	2.40	2.36	2.31
66.5	2.77	2.73	2.68	2.64	2.60	2.55	2.51	2.47	2.42	2.38
67.0	2.84	2.79	2.75	2.70	2.66	2.62	2.57	2.53	2.48	2.44
67.5	2.90	2.85	2.81	2.77	2.72	2.68	2.64	2.59	2.55	2.50
68.0	2.96	2.92	2.87	2.83	2.79	2.74	2.70	2.66	2.61	2.57
68.5	3.03	2.98	2.94	2.89	2.85	2.81	2.76	2.72	2.67	2.63
69.0	3.09	3.04	3.00	2.96	2.91	2.87	2.83	2.78	2.74	2.69
69.5	3.15	3.11	3.06	3.02	2.98	2.93	2.89	2.85	2.80	2.76
70.0	3.22	3.17	3.13	3.08	3.04	3.00	2.95	2.91	2.86	2.82
70.5	3.28	3.23	3.19	3.15	3.10	3.06	3.02	2.97	2.93	2.88
71.0	3.34	3.30	3.25	3.21	3.17	3.12	3.08	3.04	2.99	2.95
71.5	3.41	3.36	3.32	3.27	3.23	3.19	3.14	3.10	3.05	3.01
72.0	3.47	3.42	3.38	3.34	3.29	3.25	3.21	3.16	3.12	3.07
72.5	3.53	3.49	3.44	3.36	3.31	3.27	3.23	3.18	3.14	3.09
73.0	3.60	3.55	3.51	3.46	3.42	3.38	3.33	3.29	3.24	3.20
73.5	3.66	3.61	3.57	3.53	3.48	3.44	3.40	3.35	3.31	3.26
74.0	3.72	3.68	3.63	3.59	3.55	3.50	3.46	3.37	3.33	3.28
74.5	3.79	3.74	3.70	3.65	3.61	3.57	3.52	3.48	3.43	3.39
75.0	3.85	3.80	3.76	3.72	3.67	3.59	3.54	3.50	3.45	3.41
75.5	3.91	3.87	3.82	3.78	3.74	3.69	3.65	3.61	3.56	3.52
76.0	3.98	3.93	3.89	3.84	3.80	3.76	3.71	3.67	3.62	3.58
76.5	4.04	3.99	3.95	3.91	3.86	3.82	3.78	3.73	3.69	3.64
77.0	4.10	4.06	4.01	3.97	3.93	3.88	3.84	3.75	3.71	3.66
77.5	4.17	4.12	4.08	4.03	3.99	3.95	3.90	3.86	3.81	3.77

TABLE 2: MALES FEV1—75 PERCENT OF PREDICTED; KNUDSON 1983—Continued

Height	Ages 35 to 53									
	35	37	39	41	43	45	47	49	51	53
78.0	4.23	4.18	4.14	4.10	4.05	4.01	3.97	3.92	3.88	3.83
78.5	4.29	4.25	4.20	4.16	4.12	4.07	4.03	3.99	3.94	3.90
79.0	4.36	4.31	4.27	4.22	4.18	4.14	4.09	4.05	4.00	3.96
79.5	4.42	4.37	4.33	4.29	4.24	4.20	4.16	4.11	4.07	4.02
80.0	4.48	4.44	4.39	4.35	4.31	4.26	4.22	4.18	4.13	4.09
80.5	4.55	4.50	4.46	4.41	4.37	4.33	4.28	4.24	4.20	4.15
81.0	4.61	4.56	4.52	4.48	4.43	4.39	4.35	4.30	4.26	4.21
81.5	4.67	4.63	4.58	4.54	4.50	4.45	4.41	4.37	4.32	4.28
82.0	4.74	4.69	4.65	4.60	4.56	4.52	4.47	4.43	4.39	4.30
82.5	4.80	4.75	4.71	4.67	4.62	4.58	4.54	4.49	4.45	4.40
83.0	4.86	4.82	4.77	4.73	4.69	4.64	4.60	4.56	4.51	4.47
83.5	4.93	4.88	4.84	4.79	4.75	4.71	4.66	4.62	4.58	4.53
84.0	4.99	4.95	4.90	4.86	4.81	4.77	4.73	4.68	4.64	4.59
84.5	5.05	5.01	4.96	4.92	4.88	4.83	4.79	4.75	4.70	4.66
85.0	5.12	5.07	5.03	4.98	4.94	4.90	4.85	4.81	4.77	4.72

TABLE 2a: MALES FEV1—75 PERCENT OF PREDICTED; KNUDSON 1983

Height	Ages 55 to 75										
	55	57	59	61	63	65	67	69	71	73	75
56.0 ....	1.00	0.96	0.92	0.87	0.83	0.78	0.74	0.70	0.65	0.61	0.57
56.5 ....	1.07	1.02	0.98	0.94	0.89	0.85	0.80	0.76	0.72	0.67	0.63
57.0 ....	1.13	1.09	1.04	1.00	0.96	0.91	0.87	0.82	0.78	0.74	0.69
57.5 ....	1.19	1.15	1.11	1.06	1.02	0.97	0.93	0.89	0.84	0.80	0.76
58.0 ....	1.26	1.21	1.17	1.13	1.08	1.04	0.99	0.95	0.91	0.86	0.82
58.5 ....	1.32	1.28	1.23	1.19	1.15	1.10	1.06	1.01	0.97	0.93	0.88
59.0 ....	1.38	1.34	1.30	1.25	1.21	1.16	1.12	1.08	1.03	0.99	0.95
59.5 ....	1.45	1.40	1.36	1.32	1.27	1.23	1.18	1.14	1.10	1.05	1.01
60.0 ....	1.51	1.47	1.42	1.38	1.34	1.29	1.25	1.20	1.16	1.12	1.07
60.5 ....	1.57	1.53	1.49	1.44	1.40	1.35	1.31	1.27	1.22	1.18	1.14
61.0 ....	1.64	1.59	1.55	1.51	1.46	1.42	1.37	1.33	1.29	1.24	1.20
61.5 ....	1.70	1.66	1.61	1.57	1.53	1.48	1.44	1.39	1.35	1.31	1.26
62.0 ....	1.76	1.72	1.68	1.63	1.59	1.54	1.50	1.46	1.41	1.37	1.33
62.5 ....	1.83	1.78	1.74	1.70	1.65	1.61	1.56	1.52	1.48	1.43	1.39
63.0 ....	1.89	1.85	1.80	1.76	1.72	1.67	1.63	1.58	1.54	1.50	1.45
63.5 ....	1.95	1.91	1.87	1.82	1.78	1.73	1.69	1.65	1.60	1.56	1.52
64.0 ....	2.02	1.97	1.93	1.89	1.84	1.80	1.75	1.71	1.67	1.62	1.58
64.5 ....	2.08	2.04	1.99	1.95	1.91	1.86	1.82	1.77	1.73	1.69	1.64
65.0 ....	2.14	2.10	2.06	2.01	1.97	1.92	1.88	1.84	1.79	1.75	1.71
65.5 ....	2.21	2.16	2.12	2.08	2.03	1.99	1.94	1.90	1.86	1.81	1.77
66.0 ....	2.27	2.23	2.18	2.14	2.10	2.05	2.01	1.96	1.92	1.88	1.83
66.5 ....	2.33	2.29	2.25	2.20	2.16	2.11	2.07	2.03	1.98	1.94	1.90
67.0 ....	2.40	2.35	2.31	2.27	2.22	2.18	2.13	2.09	2.05	2.00	1.96
67.5 ....	2.46	2.42	2.37	2.33	2.29	2.24	2.20	2.15	2.11	2.07	2.02
68.0 ....	2.52	2.48	2.44	2.39	2.35	2.30	2.26	2.22	2.17	2.13	2.09
68.5 ....	2.59	2.54	2.50	2.46	2.41	2.37	2.32	2.28	2.24	2.19	2.15
69.0 ....	2.65	2.61	2.56	2.52	2.48	2.43	2.39	2.34	2.30	2.26	2.21
69.5 ....	2.71	2.67	2.63	2.58	2.54	2.49	2.45	2.41	2.36	2.32	2.28
70.0 ....	2.78	2.73	2.69	2.65	2.60	2.56	2.51	2.47	2.43	2.38	2.34
70.5 ....	2.84	2.80	2.75	2.72	2.67	2.62	2.58	2.53	2.49	2.45	2.40
71.0 ....	2.90	2.86	2.82	2.77	2.73	2.68	2.64	2.60	2.55	2.51	2.47
71.5 ....	2.97	2.92	2.88	2.84	2.79	2.75	2.70	2.66	2.62	2.57	2.53
72.0 ....	3.03	2.99	2.94	2.90	2.86	2.81	2.77	2.72	2.68	2.64	2.59
72.5 ....	3.09	3.05	3.01	2.96	2.92	2.87	2.83	2.79	2.74	2.70	2.66
73.0 ....	3.16	3.11	3.07	3.03	2.98	2.94	2.89	2.85	2.81	2.76	2.72
73.5 ....	3.22	3.18	3.13	3.09	3.05	3.00	2.96	2.91	2.87	2.83	2.78
74.0 ....	3.28	3.24	3.20	3.15	3.11	3.06	3.02	2.98	2.92	2.89	2.85
74.5 ....	3.35	3.30	3.26	3.22	3.17	3.13	3.08	3.04	3.00	2.95	2.91
75.0 ....	3.41	3.37	3.32	3.28	3.24	3.19	3.15	3.10	3.06	3.02	2.97
75.5 ....	3.47	3.43	3.39	3.34	3.30	3.26	3.21	3.17	3.12	3.08	3.04
76.0 ....	3.54	3.49	3.45	3.41	3.36	3.32	3.27	3.23	3.19	3.14	3.10
76.5 ....	3.60	3.56	3.51	3.47	3.43	3.38	3.34	3.29	3.25	3.21	3.16
77.0 ....	3.66	3.62	3.58	3.53	3.49	3.45	3.40	3.36	3.31	3.27	3.23
77.5 ....	3.73	3.68	3.64	3.60	3.55	3.51	3.46	3.42	3.38	3.33	3.29
78.0 ....	3.79	3.75	3.70	3.66	3.62	3.57	3.53	3.48	3.44	3.40	3.35
78.5 ....	3.85	3.81	3.77	3.72	3.68	3.64	3.59	3.55	3.50	3.46	3.42
79.0 ....	3.92	3.87	3.83	3.79	3.74	3.70	3.65	3.61	3.57	3.52	3.48
79.5 ....	3.98	3.94	3.89	3.85	3.81	3.76	3.72	3.67	3.63	3.59	3.54
80.0 ....	4.04	4.00	3.96	3.91	3.87	3.83	3.78	3.74	3.69	3.65	3.61
80.5 ....	4.11	4.06	4.02	3.98	3.93	3.89	3.84	3.80	3.76	3.71	3.67
81.0 ....	4.17	4.13	4.08	4.04	4.00	3.95	3.91	3.86	3.82	3.78	3.73
81.5 ....	4.23	4.19	4.15	4.10	4.06	4.02	3.97	3.93	3.88	3.84	3.80
82.0 ....	4.30	4.25	4.21	4.17	4.12	4.08	4.03	3.99	3.95	3.90	3.86
82.5 ....	4.36	4.32	4.27	4.23	4.19	4.14	4.10	4.05	4.01	3.97	3.92
83.0 ....	4.42	4.38	4.34	4.29	4.25	4.21	4.16	4.12	4.07	4.03	3.99
83.5 ....	4.49	4.44	4.40	4.36	4.31	4.27	4.22	4.18	4.14	4.09	4.05
84.0 ....	4.55	4.51	4.46	4.42	4.38	4.33	4.29	4.24	4.20	4.16	4.11
84.5 ....	4.61	4.57	4.53	4.48	4.44	4.40	4.35	4.31	4.26	4.22	4.18
85.0 ....	4.68	4.63	4.59	4.55	4.50	4.46	4.41	4.37	4.33	4.28	4.24

TABLE 3: FEMALES FVC—75 PERCENT OF PREDICTED; KNUDSON 1983

Height	Ages 35 to 55										
	35	37	39	41	43	45	47	49	51	53	55
52.0 ....	1.56	1.53	1.51	1.48	1.46	1.43	1.41	1.38	1.36	1.33	1.31
52.5 ....	1.60	1.58	1.55	1.52	1.50	1.47	1.45	1.42	1.40	1.37	1.35
53.0 ....	1.64	1.62	1.59	1.57	1.54	1.52	1.49	1.47	1.44	1.42	1.39
53.5 ....	1.69	1.66	1.63	1.61	1.58	1.56	1.53	1.51	1.48	1.46	1.43

TABLE 3: FEMALES FVC—75 PERCENT OF PREDICTED; KNUDSON 1983—Continued

Height	Ages 35 to 55										
	35	37	39	41	43	45	47	49	51	53	55
54.0 ....	1.73	1.70	1.68	1.65	1.63	1.60	1.58	1.55	1.52	1.50	1.47
54.5 ....	1.77	1.74	1.72	1.69	1.67	1.64	1.62	1.59	1.57	1.54	1.52
55.0 ....	1.81	1.79	1.76	1.74	1.71	1.69	1.66	1.63	1.61	1.58	1.56
55.5 ....	1.85	1.83	1.80	1.78	1.75	1.73	1.70	1.68	1.65	1.63	1.60
56.0 ....	1.90	1.87	1.85	1.82	1.80	1.77	1.74	1.72	1.69	1.67	1.64
56.5 ....	1.94	1.91	1.89	1.86	1.84	1.81	1.79	1.76	1.74	1.71	1.69
57.0 ....	1.98	1.96	1.93	1.91	1.88	1.85	1.83	1.80	1.78	1.75	1.73
57.5 ....	2.02	2.00	1.97	1.95	1.92	1.90	1.87	1.85	1.82	1.80	1.77
58.0 ....	2.07	2.04	2.02	1.99	1.96	1.94	1.91	1.89	1.86	1.84	1.81
58.5 ....	2.11	2.08	2.06	2.03	2.01	1.98	1.96	1.93	1.91	1.88	1.85
59.0 ....	2.15	2.13	2.10	2.07	2.05	2.02	2.00	1.97	1.95	1.92	1.90
59.5 ....	2.19	2.17	2.14	2.12	2.09	2.07	2.04	2.02	1.99	1.96	1.94
60.0 ....	2.24	2.21	2.18	2.16	2.13	2.11	2.08	2.06	2.03	2.01	1.98
60.5 ....	2.28	2.25	2.23	2.20	2.18	2.15	2.13	2.10	2.07	2.05	2.02
61.0 ....	2.32	2.29	2.27	2.24	2.22	2.19	2.17	2.14	2.12	2.09	2.07
61.5 ....	2.36	2.34	2.31	2.29	2.26	2.24	2.21	2.18	2.16	2.13	2.11
62.0 ....	2.40	2.38	2.35	2.33	2.30	2.28	2.25	2.23	2.20	2.18	2.15
62.5 ....	2.45	2.42	2.40	2.37	2.35	2.32	2.29	2.27	2.24	2.22	2.19
63.0 ....	2.49	2.46	2.44	2.41	2.39	2.36	2.34	2.31	2.29	2.26	2.24
63.5 ....	2.53	2.51	2.48	2.46	2.43	2.40	2.38	2.35	2.33	2.30	2.28
64.0 ....	2.57	2.55	2.52	2.50	2.47	2.45	2.42	2.40	2.37	2.35	2.32
64.5 ....	2.62	2.59	2.57	2.54	2.51	2.49	2.46	2.44	2.41	2.39	2.36
65.0 ....	2.66	2.63	2.61	2.58	2.56	2.53	2.51	2.48	2.46	2.43	2.40
65.5 ....	2.70	2.68	2.65	2.62	2.60	2.57	2.55	2.52	2.50	2.47	2.45
66.0 ....	2.74	2.72	2.69	2.67	2.64	2.62	2.59	2.57	2.54	2.51	2.49
66.5 ....	2.79	2.76	2.73	2.71	2.68	2.66	2.63	2.61	2.58	2.56	2.53
67.0 ....	2.83	2.80	2.78	2.75	2.73	2.70	2.68	2.65	2.62	2.60	2.57
67.5 ....	2.87	2.84	2.82	2.79	2.77	2.74	2.72	2.69	2.67	2.64	2.62
68.0 ....	2.91	2.89	2.86	2.84	2.81	2.79	2.76	2.73	2.71	2.68	2.66
68.5 ....	2.95	2.93	2.90	2.88	2.85	2.83	2.80	2.78	2.75	2.73	2.70
69.0 ....	3.00	2.97	2.95	2.92	2.90	2.87	2.84	2.82	2.79	2.77	2.74
69.5 ....	3.04	3.01	2.99	2.96	2.94	2.91	2.89	2.86	2.84	2.81	2.79
70.0 ....	3.08	3.06	3.03	3.01	2.98	2.95	2.93	2.90	2.88	2.85	2.83
70.5 ....	3.12	3.10	3.07	3.05	3.02	3.00	2.97	2.95	2.92	2.90	2.87
71.0 ....	3.17	3.14	3.11	3.09	3.06	3.04	3.01	2.99	2.96	2.94	2.91
71.5 ....	3.21	3.18	3.16	3.13	3.11	3.08	3.06	3.03	3.01	2.98	2.95
72.0 ....	3.25	3.22	3.20	3.17	3.15	3.12	3.10	3.07	3.05	3.02	3.00
72.5 ....	3.29	3.27	3.24	3.22	3.19	3.17	3.14	3.12	3.09	3.06	3.04
73.0 ....	3.33	3.31	3.28	3.26	3.23	3.21	3.18	3.16	3.13	3.11	3.08
73.5 ....	3.38	3.35	3.33	3.30	3.28	3.25	3.23	3.20	3.17	3.15	3.12
74.0 ....	3.42	3.39	3.37	3.34	3.32	3.29	3.27	3.24	3.22	3.19	3.17
74.5 ....	3.46	3.44	3.41	3.39	3.36	3.33	3.31	3.28	3.26	3.23	3.21
75.0 ....	3.50	3.48	3.45	3.43	3.40	3.38	3.35	3.33	3.30	3.28	3.25
75.5 ....	3.55	3.52	3.50	3.47	3.44	3.42	3.39	3.37	3.34	3.32	3.29
76.0 ....	3.59	3.56	3.54	3.51	3.49	3.46	3.44	3.41	3.39	3.36	3.34
76.5 ....	3.63	3.61	3.58	3.55	3.53	3.50	3.48	3.45	3.43	3.40	3.38
77.0 ....	3.67	3.65	3.62	3.60	3.57	3.55	3.52	3.50	3.47	3.45	3.42
77.5 ....	3.72	3.69	3.66	3.64	3.61	3.59	3.56	3.54	3.51	3.49	3.46
78.0 ....	3.76	3.73	3.71	3.68	3.66	3.63	3.61	3.58	3.55	3.53	3.50
78.5 ....	3.80	3.77	3.75	3.72	3.70	3.67	3.65	3.62	3.60	3.57	3.55
79.0 ....	3.84	3.82	3.79	3.77	3.74	3.72	3.69	3.66	3.64	3.61	3.59
79.5 ....	3.88	3.86	3.83	3.81	3.78	3.76	3.73	3.71	3.68	3.66	3.63
80.0 ....	3.93	3.90	3.88	3.85	3.83	3.80	3.77	3.75	3.72	3.70	3.67
80.5 ....	3.97	3.94	3.92	3.89	3.87	3.84	3.82	3.79	3.77	3.74	3.72
81.0 ....	4.01	3.99	3.96	3.94	3.91	3.88	3.86	3.83	3.81	3.78	3.76



TABLE 3a: FEMALES FVC—75 PERCENT OF PREDICTED; KNUDSON 1983

Height	Ages 57 to 75									
	57	59	61	63	65	67	69	71	73	75
52.0 .....	1.28	1.25	1.23	1.20	1.18	1.15	1.13	1.38	1.34	1.29
52.5 .....	1.32	1.30	1.27	1.25	1.22	1.20	1.17	1.41	1.37	1.32
53.0 .....	1.36	1.34	1.31	1.29	1.26	1.24	1.21	1.44	1.40	1.35
53.5 .....	1.41	1.38	1.36	1.33	1.31	1.28	1.25	1.47	1.43	1.38
54.0 .....	1.45	1.42	1.40	1.37	1.35	1.32	1.30	1.50	1.46	1.41
54.5 .....	1.49	1.47	1.44	1.42	1.39	1.36	1.34	1.53	1.49	1.44
55.0 .....	1.53	1.51	1.48	1.46	1.43	1.41	1.38	1.56	1.52	1.47
55.5 .....	1.58	1.55	1.53	1.50	1.47	1.45	1.42	1.59	1.55	1.50
56.0 .....	1.62	1.59	1.57	1.54	1.52	1.49	1.47	1.62	1.58	1.50
56.5 .....	1.66	1.64	1.61	1.58	1.56	1.53	1.51	1.65	1.61	1.58
57.0 .....	1.70	1.68	1.65	1.63	1.60	1.58	1.55	1.68	1.64	1.61
57.5 .....	1.74	1.72	1.69	1.67	1.64	1.62	1.59	1.71	1.67	1.64
58.0 .....	1.79	1.76	1.74	1.71	1.69	1.66	1.64	1.74	1.70	1.67
58.5 .....	1.83	1.80	1.78	1.75	1.73	1.70	1.68	1.77	1.73	1.69
59.0 .....	1.87	1.85	1.82	1.80	1.77	1.75	1.72	1.80	1.76	1.73
59.5 .....	1.91	1.89	1.86	1.84	1.81	1.79	1.76	1.83	1.79	1.76
60.0 .....	1.96	1.93	1.91	1.88	1.86	1.83	1.80	1.86	1.82	1.79
60.5 .....	2.00	1.97	1.95	1.92	1.90	1.87	1.85	1.89	1.85	1.82
61.0 .....	2.04	2.02	1.99	1.96	1.94	1.91	1.89	1.92	1.87	1.84
61.5 .....	2.08	2.06	2.03	2.01	1.98	1.96	1.93	1.95	1.90	1.87
62.0 .....	2.13	2.10	2.07	2.05	2.02	2.00	1.97	1.98	1.93	1.90
62.5 .....	2.17	2.14	2.12	2.09	2.07	2.04	2.02	2.01	1.96	1.93
63.0 .....	2.21	2.18	2.16	2.13	2.11	2.08	2.06	2.04	1.99	1.96
63.5 .....	2.25	2.23	2.20	2.18	2.15	2.13	2.10	2.07	2.02	1.99
64.0 .....	2.29	2.27	2.24	2.22	2.19	2.17	2.14	2.10	2.05	1.99
64.5 .....	2.34	2.31	2.29	2.26	2.24	2.21	2.18	2.13	2.08	1.99
65.0 .....	2.38	2.35	2.33	2.30	2.28	2.25	2.23	2.16	2.11	1.99
65.5 .....	2.42	2.40	2.37	2.35	2.32	2.29	2.27	2.19	2.14	1.99
66.0 .....	2.46	2.44	2.41	2.39	2.36	2.34	2.31	2.22	2.17	1.99
66.5 .....	2.51	2.48	2.46	2.43	2.40	2.38	2.35	2.25	2.20	1.99
67.0 .....	2.55	2.52	2.50	2.47	2.45	2.42	2.40	2.28	2.23	1.99
67.5 .....	2.59	2.57	2.54	2.51	2.49	2.46	2.44	2.31	2.26	2.02
68.0 .....	2.63	2.61	2.58	2.56	2.53	2.51	2.48	2.34	2.29	2.09
68.5 .....	2.68	2.65	2.62	2.60	2.57	2.55	2.52	2.37	2.32	2.15
69.0 .....	2.72	2.69	2.67	2.64	2.62	2.59	2.57	2.40	2.35	2.21
69.5 .....	2.76	2.73	2.71	2.68	2.66	2.63	2.61	2.43	2.38	2.28
70.0 .....	2.80	2.78	2.75	2.73	2.70	2.68	2.65	2.46	2.41	2.34
70.5 .....	2.84	2.82	2.79	2.77	2.74	2.72	2.69	2.49	2.44	2.40
71.0 .....	2.89	2.86	2.84	2.81	2.79	2.76	2.73	2.52	2.47	2.47
71.5 .....	2.93	2.90	2.88	2.85	2.83	2.80	2.78	2.55	2.50	2.53
72.0 .....	2.97	2.95	2.92	2.90	2.87	2.84	2.82	2.58	2.53	2.59
72.5 .....	3.01	2.99	2.96	2.94	2.91	2.89	2.86	2.61	2.56	2.66
73.0 .....	3.06	3.03	2.99	2.98	2.95	2.93	2.90	2.63	2.59	2.72
73.5 .....	3.10	3.07	3.05	3.02	3.00	2.97	2.95	2.66	2.62	2.78

TABLE 3a: FEMALES FVC—75 PERCENT OF PREDICTED; KNUDSON 1983—Continued

Height	Ages 57 to 75									
	57	59	61	63	65	67	69	71	73	75
74.0 .....	3.14	3.12	3.09	3.06	3.04	3.01	2.99	2.69	2.65	2.85
74.5 .....	3.18	3.16	3.13	3.11	3.08	3.06	3.03	2.72	2.68	2.91
75.0 .....	3.23	3.20	3.17	3.15	3.12	3.10	3.07	2.75	2.71	2.97
75.5 .....	3.27	3.24	3.22	3.19	3.17	3.14	3.12	3.78	2.74	3.04
76.0 .....	3.31	3.28	3.26	3.23	3.21	3.18	3.16	2.81	2.77	3.10
76.5 .....	3.35	3.33	3.30	3.28	3.25	3.23	3.20	2.84	2.80	3.16
77.0 .....	3.39	3.37	3.34	3.32	3.29	3.27	3.24	2.87	2.83	3.23
77.5 .....	3.44	3.41	3.39	3.36	3.34	3.31	3.28	2.90	2.86	3.29
78.0 .....	3.48	3.45	3.43	3.40	3.38	3.35	3.33	2.93	2.89	3.35
78.5 .....	3.52	3.50	3.47	3.45	3.42	3.39	3.37	2.96	2.92	3.42
79.0 .....	3.56	3.54	3.51	3.49	3.46	3.44	3.41	2.99	2.95	3.48
79.5 .....	3.61	3.58	3.56	3.53	3.50	3.48	3.45	3.02	2.98	3.54
80.0 .....	3.65	3.62	3.60	3.57	3.55	3.52	3.50	3.05	3.01	3.61
80.5 .....	3.69	3.67	3.64	3.61	3.59	3.56	3.54	3.08	3.04	3.67
81.0 .....	3.73	3.71	3.68	3.66	3.63	3.61	3.58	3.11	3.07	3.73

TABLE 4: FEMALES FEV1—75 PERCENT OF PREDICTED; KNUDSON 1983

Height	Ages 35 to 55										
	35	37	39	41	43	45	47	49	51	53	55
52.0 ....	1.42	1.40	1.37	1.34	1.31	1.28	1.25	1.22	1.20	1.17	1.14
52.5 ....	1.46	1.43	1.40	1.37	1.34	1.31	1.28	1.26	1.23	1.20	1.17
53.0 ....	1.49	1.46	1.43	1.40	1.37	1.35	1.32	1.29	1.26	1.23	1.20
53.5 ....	1.52	1.49	1.46	1.43	1.41	1.38	1.35	1.32	1.29	1.26	1.23
54.0 ....	1.55	1.52	1.49	1.47	1.44	1.41	1.38	1.35	1.32	1.29	1.27
54.5 ....	1.58	1.55	1.53	1.50	1.47	1.44	1.41	1.38	1.35	1.33	1.30
55.0 ....	1.61	1.59	1.56	1.53	1.50	1.47	1.44	1.41	1.39	1.36	1.33
55.5 ....	1.65	1.62	1.59	1.56	1.53	1.50	1.47	1.45	1.42	1.39	1.36
56.0 ....	1.68	1.65	1.62	1.59	1.56	1.53	1.51	1.48	1.45	1.42	1.39
56.5 ....	1.71	1.68	1.65	1.62	1.59	1.57	1.54	1.51	1.48	1.45	1.42
57.0 ....	1.74	1.71	1.68	1.66	1.63	1.60	1.57	1.54	1.51	1.48	1.46
57.5 ....	1.77	1.74	1.72	1.69	1.66	1.63	1.60	1.57	1.54	1.52	1.49
58.0 ....	1.80	1.78	1.75	1.72	1.69	1.66	1.63	1.60	1.58	1.55	1.52
58.5 ....	1.84	1.81	1.78	1.75	1.72	1.69	1.66	1.64	1.61	1.58	1.55
59.0 ....	1.87	1.84	1.81	1.78	1.75	1.72	1.70	1.67	1.64	1.61	1.58
59.5 ....	1.90	1.87	1.84	1.81	1.78	1.76	1.73	1.70	1.67	1.64	1.61
60.0 ....	1.93	1.90	1.87	1.84	1.82	1.79	1.76	1.73	1.70	1.67	1.65
60.5 ....	1.96	1.93	1.90	1.88	1.85	1.82	1.79	1.76	1.73	1.71	1.68
61.0 ....	1.99	1.97	1.94	1.91	1.88	1.85	1.82	1.79	1.77	1.74	1.71
61.5 ....	2.03	2.00	1.97	1.94	1.91	1.88	1.85	1.83	1.80	1.77	1.74
62.0 ....	2.06	2.03	2.00	1.97	1.94	1.91	1.89	1.86	1.83	1.80	1.77
62.5 ....	2.09	2.06	2.03	2.00	1.97	1.95	1.92	1.89	1.86	1.83	1.80
63.0 ....	2.12	2.09	2.06	2.03	2.01	1.98	1.95	1.92	1.89	1.86	1.83
63.5 ....	2.15	2.12	2.09	2.07	2.04	2.01	1.98	1.95	1.92	1.90	1.87
64.0 ....	2.18	2.15	2.13	2.10	2.07	2.04	2.01	1.98	1.96	1.93	1.90
64.5 ....	2.21	2.19	2.16	2.13	2.10	2.07	2.04	2.02	1.99	1.96	1.93
65.0 ....	2.25	2.22	2.19	2.16	2.13	2.10	2.08	2.05	2.02	1.99	1.96
65.5 ....	2.28	2.25	2.22	2.19	2.16	2.14	2.11	2.08	2.05	2.02	1.99
66.0 ....	2.31	2.28	2.25	2.22	2.20	2.17	2.14	2.11	2.08	2.05	2.02
66.5 ....	2.34	2.31	2.28	2.26	2.23	2.20	2.17	2.14	2.11	2.08	2.06
67.0 ....	2.37	2.34	2.32	2.29	2.26	2.23	2.20	2.17	2.14	2.12	2.09
67.5 ....	2.40	2.38	2.35	2.32	2.29	2.26	2.23	2.21	2.18	2.15	2.12
68.0 ....	2.44	2.41	2.38	2.35	2.32	2.29	2.27	2.24	2.21	2.18	2.15
68.5 ....	2.47	2.44	2.41	2.38	2.35	2.33	2.30	2.27	2.24	2.21	2.18
69.0 ....	2.50	2.47	2.44	2.41	2.39	2.36	2.33	2.30	2.27	2.24	2.21
69.5 ....	2.53	2.50	2.47	2.45	2.42	2.39	2.36	2.33	2.30	2.27	2.25
70.0 ....	2.56	2.53	2.51	2.48	2.45	2.42	2.39	2.36	2.33	2.31	2.28
70.5 ....	2.59	2.57	2.54	2.51	2.48	2.45	2.42	2.39	2.37	2.34	2.31
71.0 ....	2.63	2.60	2.57	2.54	2.51	2.48	2.45	2.43	2.40	2.37	2.34
71.5 ....	2.66	2.63	2.60	2.57	2.54	2.52	2.49	2.46	2.43	2.40	2.37
72.0 ....	2.69	2.66	2.63	2.60	2.58	2.55	2.52	2.49	2.46	2.43	2.40
72.5 ....	2.72	2.69	2.66	2.64	2.61	2.58	2.55	2.52	2.49	2.46	2.44
73.0 ....	2.75	2.72	2.70	2.67	2.64	2.61	2.58	2.55	2.52	2.50	2.47
73.5 ....	2.78	2.76	2.73	2.70	2.67	2.64	2.61	2.58	2.56	2.53	2.50
74.0 ....	2.82	2.79	2.76	2.73	2.70	2.67	2.64	2.62	2.59	2.56	2.53
74.5 ....	2.85	2.82	2.79	2.76	2.73	2.70	2.68	2.65	2.62	2.59	2.56
75.0 ....	2.88	2.85	2.82	2.79	2.76	2.74	2.71	2.68	2.65	2.62	2.59
75.5 ....	2.91	2.88	2.85	2.83	2.80	2.77	2.74	2.71	2.68	2.65	2.63
76.0 ....	2.94	2.91	2.89	2.86	2.83	2.80	2.77	2.74	2.71	2.69	2.66
76.5 ....	2.97	2.95	2.92	2.89	2.86	2.83	2.80	2.77	2.75	2.72	2.69
77.0 ....	3.01	2.98	2.95	2.92	2.89	2.85	2.83	2.81	2.78	2.75	2.72
77.5 ....	3.04	3.01	2.98	2.95	2.92	2.89	2.87	2.84	2.81	2.78	2.75
78.0 ....	3.07	3.04	3.01	2.98	2.95	2.93	2.90	2.87	2.84	2.81	2.78
78.5 ....	3.10	3.07	3.04	3.01	2.99	2.96	2.93	2.90	2.87	2.84	2.82
79.0 ....	3.13	3.10	3.07	3.05	3.02	2.99	2.96	2.93	2.90	2.88	2.85
79.5 ....	3.16	3.14	3.11	3.08	3.05	3.02	2.99	2.96	2.94	2.91	2.88
80.0 ....	3.20	3.17	3.14	3.11	3.08	3.05	3.02	3.00	2.97	2.94	2.91
80.5 ....	3.23	3.20	3.17	3.14	3.11	3.08	3.06	3.03	3.00	2.97	2.94
81.0 ....	3.26	3.23	3.20	3.17	3.14	3.12	3.09	3.06	3.03	3.00	2.97

TABLE 4a: FEMALES FEV1—75 PERCENT OF PREDICTED; KNUDSON 1983

Height	Ages 57 to 75									
	57	59	61	63	65	67	69	71	73	75
52.0	1.11	1.08	1.05	1.03	1.00	0.97	0.94	1.29	1.23	1.23
52.5	1.14	1.11	1.09	1.06	1.03	1.00	0.97	1.31	1.25	1.25
53.0	1.17	1.15	1.12	1.09	1.06	1.03	1.00	1.32	1.26	1.26
53.5	1.21	1.18	1.15	1.12	1.09	1.06	1.03	1.33	1.27	1.27
54.0	1.24	1.21	1.18	1.15	1.12	1.09	1.07	1.35	1.29	1.29
54.5	1.27	1.24	1.21	1.18	1.15	1.13	1.10	1.36	1.30	1.30
55.0	1.30	1.27	1.24	1.22	1.19	1.16	1.13	1.37	1.32	1.32
55.5	1.33	1.30	1.28	1.25	1.22	1.19	1.16	1.39	1.33	1.33
56.0	1.36	1.34	1.31	1.28	1.25	1.22	1.19	1.40	1.34	1.34
56.5	1.40	1.37	1.34	1.31	1.28	1.25	1.22	1.42	1.36	1.36
57.0	1.43	1.40	1.37	1.34	1.31	1.28	1.26	1.43	1.37	1.37
57.5	1.46	1.43	1.40	1.37	1.34	1.32	1.29	1.44	1.38	1.38
58.0	1.49	1.46	1.43	1.40	1.38	1.35	1.32	1.46	1.40	1.40
58.5	1.52	1.49	1.46	1.44	1.41	1.38	1.35	1.47	1.41	1.41
59.0	1.55	1.53	1.50	1.47	1.44	1.41	1.38	1.48	1.42	1.42
59.5	1.59	1.56	1.53	1.50	1.47	1.44	1.41	1.50	1.44	1.44
60.0	1.62	1.59	1.56	1.53	1.50	1.47	1.45	1.51	1.45	1.45
60.5	1.65	1.62	1.59	1.56	1.53	1.51	1.48	1.52	1.46	1.46
61.0	1.68	1.65	1.62	1.59	1.57	1.54	1.51	1.54	1.48	1.48
61.5	1.71	1.68	1.65	1.63	1.60	1.57	1.54	1.55	1.49	1.49
62.0	1.74	1.71	1.69	1.66	1.63	1.60	1.57	1.57	1.51	1.51
62.5	1.77	1.75	1.72	1.69	1.66	1.63	1.60	1.58	1.52	1.52
63.0	1.81	1.78	1.75	1.72	1.69	1.66	1.64	1.59	1.53	1.53
63.5	1.84	1.81	1.78	1.75	1.72	1.70	1.67	1.61	1.55	1.55
64.0	1.87	1.84	1.81	1.78	1.76	1.73	1.70	1.62	1.56	1.56
64.5	1.90	1.87	1.84	1.82	1.79	1.76	1.73	1.63	1.57	1.57
65.0	1.93	1.90	1.88	1.85	1.82	1.79	1.76	1.65	1.59	1.59
65.5	1.96	1.94	1.91	1.88	1.85	1.82	1.79	1.66	1.60	1.60
66.0	2.00	1.97	1.94	1.91	1.88	1.85	1.83	1.67	1.61	1.61
66.5	2.03	2.00	1.97	1.94	1.91	1.89	1.86	1.69	1.63	1.63
67.0	2.06	2.03	2.00	1.97	1.95	1.92	1.89	1.70	1.64	1.64
67.5	2.09	2.06	2.03	2.01	1.98	1.95	1.92	1.72	1.66	1.66
68.0	2.12	2.09	2.07	2.04	2.01	1.98	1.95	1.73	1.67	1.67
68.5	2.15	2.13	2.10	2.07	2.04	2.01	1.98	1.74	1.68	1.68
69.0	2.19	2.16	2.13	2.10	2.07	2.04	2.01	1.76	1.70	1.70
69.5	2.22	2.19	2.16	2.13	2.10	2.08	2.05	1.77	1.71	1.71
70.0	2.25	2.22	2.19	2.16	2.14	2.11	2.08	1.78	1.72	1.72
70.5	2.28	2.25	2.22	2.20	2.17	2.14	2.11	1.80	1.74	1.74
71.0	2.31	2.28	2.26	2.23	2.20	2.17	2.14	1.81	1.75	1.75
71.5	2.34	2.32	2.29	2.26	2.23	2.20	2.17	1.82	1.76	1.76
72.0	2.38	2.35	2.32	2.29	2.26	2.23	2.20	1.84	1.78	1.78
72.5	2.41	2.38	2.35	2.32	2.29	2.26	2.24	1.85	1.79	1.79
73.0	2.44	2.41	2.38	2.35	2.32	2.30	2.27	1.87	1.81	1.81
73.5	2.47	2.44	2.41	2.39	2.36	2.33	2.30	1.88	1.82	1.82

Department of Justice

Pt. 79, App. A

74.0	2.50	2.47	2.45	2.42	2.39	2.36	2.33	1.89	1.83	3.64
74.5	2.53	2.51	2.48	2.45	2.42	2.39	2.36	1.91	1.85	3.72
75.0	2.57	2.54	2.51	2.48	2.45	2.42	2.39	1.92	1.86	3.80
75.5	2.60	2.57	2.54	2.51	2.48	2.45	2.43	1.93	1.87	3.88
76.0	2.63	2.60	2.57	2.54	2.51	2.49	2.46	1.95	1.89	3.96
76.5	2.66	2.63	2.60	2.57	2.55	2.52	2.49	1.96	1.90	4.04
77.0	2.69	2.66	2.63	2.61	2.58	2.55	2.52	1.97	1.91	4.12
77.5	2.72	2.70	2.67	2.64	2.61	2.58	2.55	1.99	1.93	4.20
78.0	2.76	2.73	2.70	2.67	2.64	2.61	2.58	2.00	1.94	4.28
78.5	2.79	2.76	2.73	2.70	2.67	2.64	2.62	2.01	1.96	4.36
79.0	2.82	2.79	2.76	2.73	2.70	2.68	2.65	2.03	1.97	4.44
79.5	2.85	2.82	2.79	2.76	2.74	2.71	2.68	2.04	1.98	4.52
80.0	2.88	2.85	2.82	2.80	2.77	2.74	2.71	2.06	2.00	4.60
80.5	2.91	2.88	2.86	2.83	2.80	2.77	2.74	2.07	2.01	4.68
81.0	2.94	2.92	2.89	2.86	2.83	2.80	2.77	2.08	2.02	4.76

Pt. 79, App. B

28 CFR Ch. I (7–1–98 Edition)

APPENDIX B TO PART 79—BLOOD-GAS  
TABLES

For arterial blood-gas studies performed at test locations between sea level and 2,999 feet above sea level:

Arterial pCO <sub>2</sub>	and arterial pO <sub>2</sub>
25 mmHg or below	80 mmHg or below.
26 mmHg	79 mmHg or below.
27 mmHg	78 mmHg or below.
28 mmHg	77 mmHg or below.
29 mmHg	76 mmHg or below.
30 mmHg	75 mmHg or below.
31 mmHg	74 mmHg or below.
32 mmHg	73 mmHg or below.
33 mmHg	72 mmHg or below.
34 mmHg	71 mmHg or below.
35 mmHg	70 mmHg or below.
36 mmHg	69 mmHg or below.
37 mmHg	68 mmHg or below.
38 mmHg	67 mmHg or below.
39 mmHg	66 mmHg or below.
40–49 mmHg	65 mmHg or below.
Above 50 mmHg	Any value.

For arterial blood gas studies performed at test locations above 3,000 feet above sea level:

Arterial pCO <sub>2</sub>	and arterial pO <sub>2</sub>
25 mmHg or below	75 mmHg or below.
26 mmHg	74 mmHg or below.
27 mmHg	73 mmHg or below.
28 mmHg	72 mmHg or below.
29 mmHg	71 mmHg or below.
30 mmHg	70 mmHg or below.
31 mmHg	69 mmHg or below.
32 mmHg	68 mmHg or below.
33 mmHg	67 mmHg or below.
34 mmHg	66 mmHg or below.
35 mmHg	65 mmHg or below.
36 mmHg	64 mmHg or below.
37 mmHg	63 mmHg or below.
38 mmHg	62 mmHg or below.
39 mmHg	61 mmHg or below.
40–49 mmHg	60 mmHg or below.
Above 50 mmHg	Any value.

APPENDIX C TO PART 79—RADIATION EXPOSURE COMPENSATION ACT OFFSET WORKSHEET—  
ONSITE PARTICIPANTS

(1) Year	(2) Payment	X	(3) (Present CPI	/	(4) Past CPI	=	(5) Inflated P.V.
1960		X	(	/	29.6)	=	
1961		X	(	/	29.9)	=	
1962		X	(	/	30.2)	=	
1963		X	(	/	30.6)	=	
1964		X	(	/	31.0)	=	
1965		X	(	/	31.5)	=	
1966		X	(	/	32.4)	=	
1967		X	(	/	33.4)	=	
1968		X	(	/	34.8)	=	
1969		X	(	/	36.7)	=	
1970		X	(	/	38.8)	=	
1971		X	(	/	40.5)	=	
1972		X	(	/	41.8)	=	
1973		X	(	/	44.4)	=	
1974		X	(	/	49.3)	=	
1975		X	(	/	53.8)	=	
1976		X	(	/	56.9)	=	
1977		X	(	/	60.6)	=	
1978		X	(	/	65.2)	=	
1979		X	(	/	72.6)	=	
1980		X	(	/	82.4)	=	
1981		X	(	/	90.9)	=	
1982		X	(	/	96.5)	=	
1983		X	(	/	99.6)	=	
1984		X	(	/	103.9)	=	
1985		X	(	/	107.6)	=	
1986		X	(	/	109.6)	=	
1987		X	(	/	113.6)	=	
1988		X	(	/	118.3)	=	
1989		X	(	/	124.0)	=	
1990		X	(	/	130.7)	=	
XXXX		X	(	/	)	=	
Total of Column (5) equals "Actuarial present value" of past payments							
Subtract total of Column (5) from \$75,000 net claim owed to claimant							